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A WEEKLY SOUTHERN INDUSTRIAL RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XL. No. 21.

$4.00 per year. Single Copy 10 Cents.

In This Issue:

Gen. Leonard Wood, Governor-General of Cuba, discusses the business relations of that Island and the South.

Possibilities of the Negro in Southern Industrial Development.

The Progress and Prospects of Galveston.

THE FULL TABLE OF CONTENTS WILL BE FOUND ON PAGE 368.

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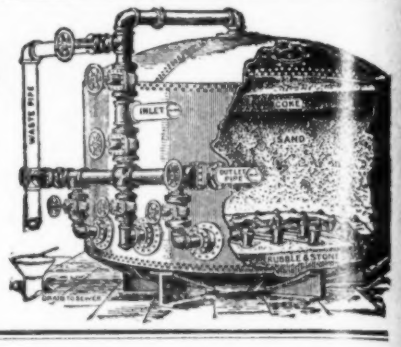

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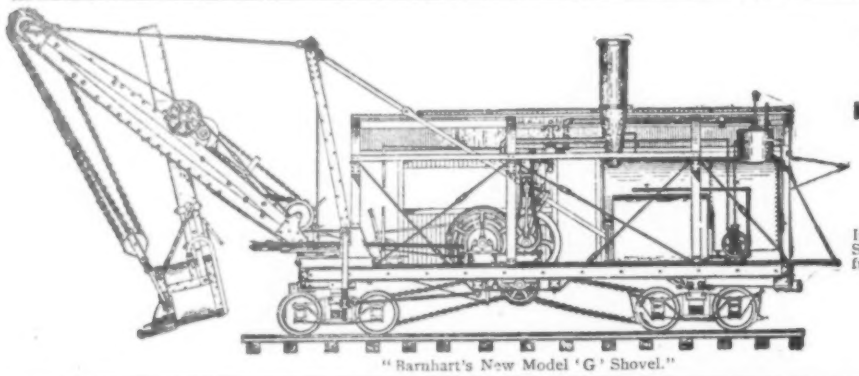

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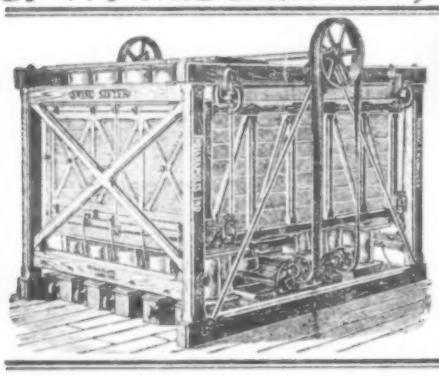

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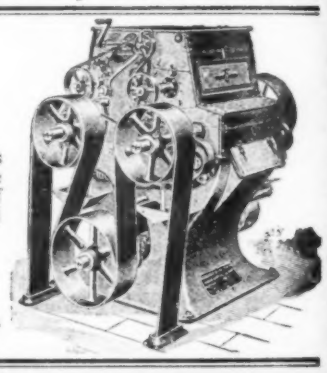

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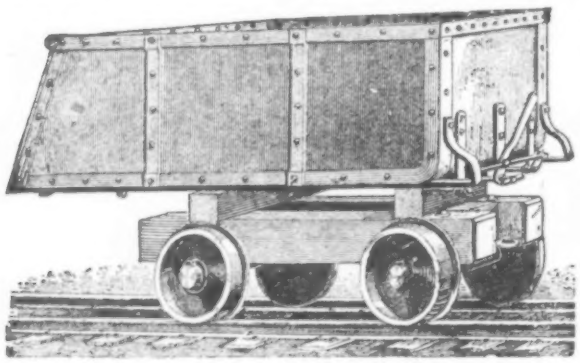

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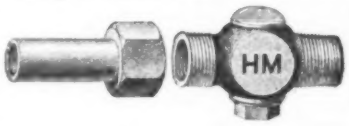

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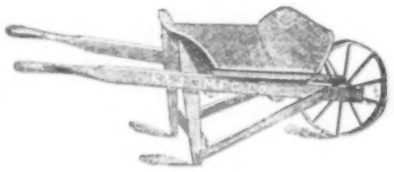

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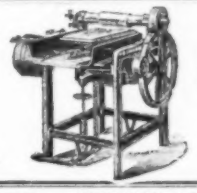

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For Alphabetical Index See Page 29.

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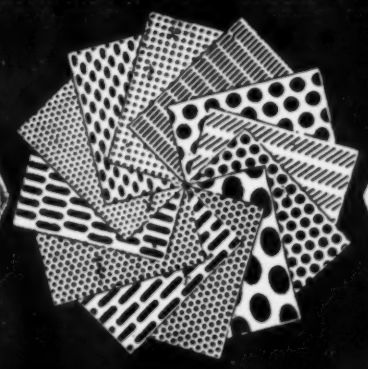

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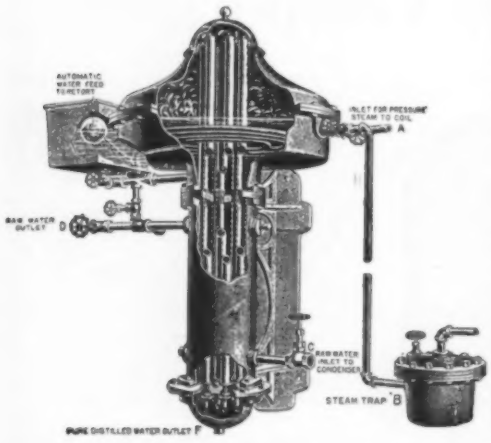
Pure Distilled Water (Not a Filter)



This illustration shows the size No. 7 JEWELL STILL. Capacity 15 gallons per hour with 40-lbs. of boiler steam pressure upon the heating coil.
This apparatus should be used for pure drinking water for hospitals, hotels, and laboratory use.
This distilled water is palatable and aerated, and is delivered cold directly from the still.
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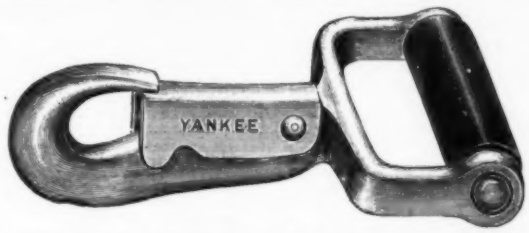

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For Alphabetical Index See Page 29.

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Glamorgan Pipe & Foundry Co., Lynchburg, Va.
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Wood, R. D., & Co., Philadelphia, Pa.

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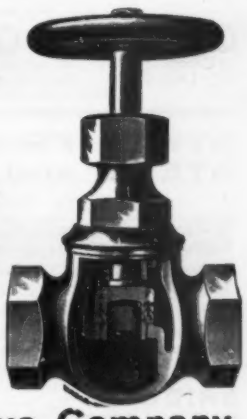

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Classified Index of Advertisers.

For Alphabetical Index See Page 29.

Drills. (Twist.)
American Tool Work Co., Cincinnati, O.
Barnes Co., W. F. & John, Rockford, Ill.
Morse Twist Drill & Machine Co., New Bedford, Mass.

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Sturtevant Co., B. F., Boston, Mass.

Dumbwaiters.
Speidel, J. G., Reading, Pa.

Drying Machinery.
Alsing Co., Inc., J. R., Brooklyn, N. Y.
American Blower Co., Detroit, Mich.
Bailey-Lebby Co., The, Charleston, S. C.
Crown Dryer Co., Cleveland, O.
Jeffrey Mfg. Co., The, Columbus, O.
Ruggles-Coles Engineering Co., New York, N. Y.
Sturtevant Co., B. F., Boston, Mass.
West Pulverizing Machine Co., New York, N. Y.

Dust-Collecting System.
Allington & Curtis Mfg. Co., Saginaw, E. S. Mic
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

Dyeing Machinery.
Fairmount Machine Co., Philadelphia, Pa.
Klauder-Weldon Co., Amsterdam, N. Y.

Dynamos and Motors.
Alexander, Jr., Co., S. B., Charlotte, N. C.
Commercial Electric Co., Indianapolis, Ind.
Crocker-Wheeler Co., Ampere, N. J.
General Electric Co., Schenectady, N. Y.
Guarantee Electric Co., Chicago, Ill.
Kentucky Electrical Co., Owensboro, Ky.
New Jersey Foundry & Machine Co., Plainfield, N. J.
Northern Electrical Mfg. Co., Madison, Wis.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Smethurst & Allen, Philadelphia, Pa.
Smith, Samuel J., & Co., Charlotte, N. C.
Sprague Electric Co., New York, N. Y.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Triumph Electric Co., Cincinnati, O.
Victor Electric Co., Chicago, Ill.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Electric Contractors.
Alexander, Jr., S. B., Co., Charlotte, N. C.
Electric Supply Co., Savannah, Ga.
Jenks, W. H., Richmond, Va.
Northern Elec. Mfg. Co., Madison, Wis.
Stanley Elec. Mfg. Co., Pittsfield, Mass.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Upton, W. P., Co., Washington, D. C.

Electrical Instruments.
Northern Electric Supply Co., Madison, Wis.
Stanley Electric Mfg. Co., Pittsfield, Mass.

Electric-Light and Power Plants.
Alexander, Jr., Co., S. B., Charlotte, N. C.
Commercial Electric Co., Indianapolis, Ind.
Crocker-Wheeler Co., Ampere, N. J.
General Electric Co., Schenectady, N. Y.
General Incandescent Arc Light Co., New York.
N. J. Foundry & Machine Co., Plainfield, N. J.
Northern Electrical Mfg. Co., Madison, Wis.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Smethurst & Allen, Philadelphia, Pa.
Sprague Electric Co., New York, N. Y.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Triumph Electric Co., Cincinnati, O.
Upton, W. P., Co., Washington, D. C.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Electric Railway Equipment.
Alexander, Jr., Co., S. B., Charlotte, N. C.
General Electric Co., Schenectady, N. Y.
Northern Electrical Mfg. Co., Madison, Wis.
Sprague Electric Co., New York, N. Y.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
Western Electrical Supply Co., St. Louis, Mo.

Electrical Repairs.
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General Incandescent Arc Light Co., New York.
Guarantee Electric Co., Chicago, Ill.
Kentucky Electrical Co., Owensboro, Ky.
Smith, Samuel J., & Co., Charlotte, N. C.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Electrical Supplies.
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Electric Supply Co., Savannah, Ga.
General Electric Co., Schenectady, N. Y.
Guarantee Electric Co., Chicago, Ill.
Jenks, W. H., Richmond, Va.
Johns Mfg. Co., H. W., New York, N. Y.
Kentucky Electrical Co., Owensboro, Ky.
Northern Electrical Mfg. Co., Madison, Wis.
Smith, Samuel J., & Co., Charlotte, N. C.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Sturtevant Co., B. F., Boston, Mass.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Triumph Electric Co., Cincinnati, O.
Western Electrical Supply Co., St. Louis, Mo.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa

Electric Locomotives. (See Locomo. Bldrs.

Electric Trucks.
Baldwin Locomotive Works, Philadelphia, Pa.

Electrotypers.
American Type Founders Co., Baltimore, Md.
Spencer & Hall, Baltimore, Md.

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Aultman Co., The, Canton, O.
Bartlett, Hayward & Co., Baltimore, Md.
Bates', James, Sons, Baltimore, Md.
Curran, Jas. H., Elevator Co., Cincinnati, O.
Eaton & Prince Co., Chicago, Ill.
Fairmount Machine Co., Philadelphia, Pa.
Faunt Le Roy & Co., Baltimore, Md.
Link-Belt Engineering Co., Philadelphia, Pa.
Maryland Foundry & Machine Co., Baltimore, Md.
Morse, Williams & Co., Philadelphia, Pa.
Parkhurst Bros. & Co., Indianapolis, Ind.
Park Mfg. Co., Charlotte, N. C.
Speidel, J. G., Reading, Pa.
Union Elevator & Machine Co., Chicago, Ill.
Westbrooks, J. B., Fdry. & Mch. Co., Danville, Va.

Elevator Buckets.
Caldwell, H. W., & Son Co., Chicago, Ill.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Engineering Co., Philadelphia, Pa.
Tate, Jones & Co., Pittsburg, Pa.

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Balderston, H., & Son, Baltimore, Md.
Bolles, J. E., Iron & Wire Works, Detroit, Mich.
Dow Wire Work Co., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Ludlow-Saylor Wire Co., The, St. Louis, Mo.
Myers Mfg. Co., The Fred J., Hamilton, O.

Elevator Rope. [See Wire Rope.]

Emery.
Carborundum Co., The, Niagara Falls, N. Y.
Scranton Corundum & Emery Wheel Co., Scranton, Pa.
Tanite Co., The, Stroudsburg, Pa.

Emery Wheels. [See Grinding and Polishing Machinery.]

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Adams, Henry, Baltimore, Md.
American Bridge Co., New York, N. Y.
Blanton, Jr., E. A., Philadelphia, Pa.
Collier & Brown, Atlanta, Ga.
Erikson, Edw. E., Pittsburg, Pa.
Given, Wm. M., Birmingham, Ala.
Hall, Charles A. M. E., Mobile, Ala.
Hutton Engineering Co., Lexington, Va.
Kennedy, Walter, Pittsburg, Pa.
Lederle, Frank, Atlanta, Ga.
Marrow, W. Drummond, Charlotte, N. C.
Morrison & Kindervater, Richmond, Va
Nicol, T. W., Mobile, Ala.
Northern Elec. Mfg. Co., Madison, Wis.
Perry, Nathaniel V., Atlanta, Ga.
Pratt & Boltwood, Chapel Hill, N. C.
Pratt Laboratory, N. P., Atlanta, Ga.
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Reid, Thorburn, New York, N. Y.
Risdon-Alcott Turbine Co., Mount Holly, N. J.
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Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Upton, W. P., Co., Washington, D. C.
Virginia Bridge & Iron Co., Roanoke, Va.
Witherow, Jas. P., Pittsburg, Pa.

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American Blower Co., Detroit, Mich.
Atlas Engine Works, Indianapolis, Ind.
Ball Engine Co., The, Erie, Pa.
Ball & Wood Co., New York, N. Y.
Boston Blower Co., Hyde Park, Mass.
Brownell & Co., The, Dayton, O.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Erie Pump & Engine Co., Erie, Pa.
Furquhar Co., A. B., Lt., York, Pa.
Frick Co., Waynesboro, Pa.
Gibbes, W. H., & Co., Columbia, S. C.
Greenwald Co., I. & E., Cincinnati, O.
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High Point Machine Works, High Point, N. C.
Hill, Wm. E., & Co., Kalamazoo, Mich.
International Power Co., Providence, R. I.
Leffel, James, & Co., Springfield, O.
Lidgerwood Mfg. Co., New York, N. Y.
Lombard Iron Works & Supply Co., Atlanta, Ga.
McClave, Hamilton & Rimmer, New York, N. Y.
McIntosh, Seymour & Co., New York, N. Y.
Murray Iron Works Co., Burlington, Iowa.
Mecklenburg Iron Works, Charlotte, N. C.
Minnigerode, Wm., Lynchburg, Va.
Newport News Shipb'g & Drv Dock Co., N. News, Va.
Phillips, Edward W., Baltimore, Md.
Phoenix Iron Works Co., Meadville, Pa.
Remington Machine Co., Wilmington, Del.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Salem Iron Works, Winston-Salem, N. C.
Schofields, J. S., Sons Co., Macon, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Eng. & Boiler Works, Jackson, Tenn.
Southwark Foundry & Machine Co., Philadelphia, Pa.
St. Louis Iron & Machine Works, St. Louis, Mo.
Struthers, Wells & Co., Warren, Pa.
Sturtevant Co., B. F., Boston, Mass.
Union Iron Works Co., Selma, Ala.
Valk & Murdoch Iron Works, Charleston, S. C.
Valley Iron Works, Williamsport, Pa.
Vilter Mfg. Co., Milwaukee, Wis.
Wetherill, Robert, & Co., Chester, Pa
Westinghouse Machine Co., Pittsburg, Pa.
York Mfg. Co., York, Pa.

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Blakeslee Mfg. Co., The, Birmingham, Ala.
Columbus Machine Co., Columbus, O.
Fairbanks Co., Baltimore, Md.
Olds Motor Works, Detroit, Mich.
Otto Gas Engine Works, Philadelphia, Pa.
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Westinghouse Machine Co., Pittsburg, Pa

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Mietz, A., New York, N. Y.

Engines. (Oil.)
Aultman Co., The, Canton, O.

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Acme Photo-Engraving Co., Baltimore, Md.
Alpha Photo Engraving Co., Baltimore, Md.
Baltimore Engraving Co., Baltimore, Md.
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Exhaust Heads.
Bonar James, & Co., Pittsburg, Pa.
Burt Mfg. Co., Akron, O.
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

Expansion Bolts.
New Jersey Foundry & Machine Co., Plainfield, N. J.

Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

Feed-Water Heaters and Purifiers.
Berryman, Jas., Philadelphia, Pa.
Bonar, James, & Co., Pittsburg, Pa.
Gem City Boiler Co., Dayton, O.
Green Fuel Economizer Co., Matteawan, N. Y.
Greenwald Co., I. & E., Cincinnati, O.
Harrison Safety Boiler Works, Philadelphia, Pa.
Kelley, Benj. F., & Son, New York, N. Y.
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Patterson, Frank L., New York, N. Y.
Phillips, E. W., Baltimore, Md.
Phoenix Iron Works Co., Meadville, Pa.
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Baeder, Adamson & Co., Philadelphia, Pa.

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Eureka Supply Co., Chattanooga, Tenn.
Ludlow-Saylor Wire Co., St. Louis, Mo.
New Jersey Wire Cloth Co., Trenton, N. J.

Fertilizer Machinery. (See Phosphate Mchy.)

Files.
Barnett Co., G. & H., Philadelphia, Pa.
Besly, Chas. H., & Co., Chicago, Ill.
Nicholson File Co., Providence, R. I.

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Hammond Iron Works, Warren, Pa.
Industrial Water Co., New York, N. Y.
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N. Y. Continental Jewell Filtration Co., New York, N. Y.
Scaife, Wm. B., & Sons, Pittsburg, Pa.
Watson, N. A., Erie, Pa.

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Classified Index of Advertisers.

For Alphabetical Index See Page 29.

Fire-Brick.
Carolina Fire-Brick Works, Killian, S. C.
Garden City Sand Co., Chicago, Ill.
Pomona Terra Cotta Co., Pomona, N. C.
Powhatan Clay Mfg. Co., Richmond, Va.
Reese-Hammond Fire-Brick Co., Bolivar, Pa.
Stevens', H., Sons Co., Macon, Ga.

Fire Extinguishers.
Childs Co. O. J., Utica, N. Y.

Fire Escapes.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works Co., Louisville, Ky.

Flooring. (Polished Hardwood.)
Adams, J. M., Baltimore, Md.
Wilce Co., The T., Chicago, Ill.

Flour and Grist Mill Machinery and Supplies.
Alsing Co., Inc., J. R., Brooklyn, N. Y.
Caldwell, H. W., & Son Co., Chicago, Ill.
Dehner-Wuerpel Mill Bldg. Co., St. Louis, Mo.
DeLoach Mill Mfg. Co., Atlanta, Ga.
Nordyke & Marmon Co., Indianapolis, Ind.
Salem Machine Works, Salem, Va.
Sprout, Waldron & Co., Muncy, Pa.
Starr, B. F., & Co., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Forges.
Boston Blower Co., Hyde Park, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., B. F., Boston, Mass.

Foundry Equipment and Supplies.
Etting, Edw. J., Philadelphia, Pa.
Hill & Griffith Co., Cincinnati, O.
Obermayer Co., S., Cincinnati, O.

Foundry Ladles. [See Foundry Equipment

Fuel Economizer.
Broomell, Schmidt & Co., Ltd., York, Pa.
Green Fuel Economizer Co., Matteawan, N. Y.

Fuel Oil Equipment and Machinery.
Petroleum Iron Works Co., Washington, Pa.
Rockwell Engineering Co., New York.

Furnace Builders.
Erikson, Edw. E., Pittsburg, Pa.
Kennedy, Walter, Pittsburg, Pa.
Means & Fulton Iron Works, Birmingham, Ala.
Witherow, Jas. P., Pittsburg, Pa.

Furnace Heating. (Stoves.)
Richmond Stove Co., Norwich, Conn.

Furnaces. (Metallurgical.)
Rockwell Engineering Co., New York, N. Y.

Furnaces. (Gas Soldering.)
Jacobson Mch. Mfg. Co., Warren, Pa.

Gages (Recording) and Counters.
American Steam Gauge Co., Boston, Mass.
Crosby Steam Gauge & Valve Co., Boston, Mass.

Galvanized Sheets.
American Sheet Steel Co., New York, N. Y.

Gas Regulator.
Jacobson Machine Manufacturing Co., Warren, Pa.

Gas Producers.
Erikson, Edward L., Pittsburg, Pa.
Wood, R. D., & Co., Philadelphia, Pa.

Gas and Steam Fitters' Tools.
Saunders' Sons, D., Yonkers, N. Y.

Gaskets. (Rubber.)
Boston Belting Co., Boston, Mass.

Gear Cutting Machines.
Whiton Machine Co., D. E., New London, Conn.

Gears and Pinions. (Raw Hide.)
New Process Rawhide Co., Syracuse, N. Y.

Gearing.
Chester Steel Castings Co., Philadelphia, Pa.
Fairmount Machine Co., Philadelphia, Pa.
Jeffrey Mfg. Co., The, Columbus, O.
Greenwald Co., I. & E., Cincinnati, O.
Link-Belt Engineering Co., Philadelphia, Pa.
Morse, Williams & Co., Philadelphia, Pa.
New Process Rawhide Co., Syracuse, N. Y.
Nuttall Co., R. D., Pittsburg, Pa.
Smith Co., S. Morgan, York, Pa.
Woods' Sons, T. B., Chambersburg, Pa.

Geologist.
Catlett, Chas., Staunton, Va

Graphophones.
Columbia Phonograph Co., Balto., Md.

Grates and Grate Bars.
McClave, Brooks & Co., Scranton, Pa.

Grates. (Domestic.)
Burnham Grate Co., Huntsville, Ala.

Grain Elevator Supplies.
Aultman Co., The, Canton, O.
Caldwell, H. W., & Son Co., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Engineering Co., Nicetown, (Phila.) Pa.

Graphite.
Detroit Graphite Mfg. Co., Detroit, Mich.
Dixon Crucible Co., Jos., Jersey City, N. J.
Hill & Griffith Co., Cincinnati, O.

Grease. (Lubricating.)
Cook's Sons, Adam, New York, N. Y.
Robinson, Wm. C., & Son, Baltimore, Md.

Grinding and Polishing Mchy.
Abrasive Material Co., The, Philadelphia, Pa.
Builders' Iron Foundry, Providence, R. I.
Carborundum Co., The, Niagara Falls, N. Y.
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Scranton Corundum & Emery Wheel Co., Scranton, Pa.
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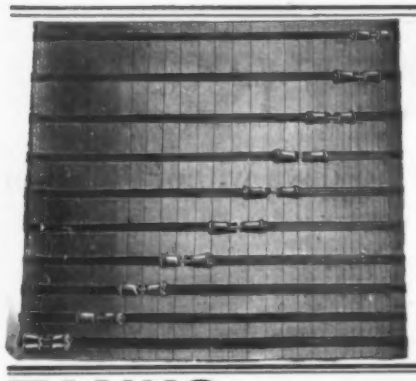

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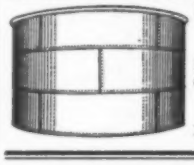

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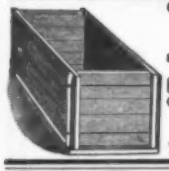

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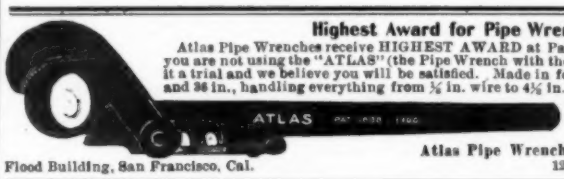

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Classified Index of Advertisers.

For Alphabetical Index See Page 29.

Looms and Weaving Machinery.
American Supply Co., Providence, R. I.
Draper Co., Hopedale, Mass.
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Alsing Co., J. R., Inc., Brooklyn, N. Y.
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Philadelphia Textile Specialty Mch. Co., Phila., Pa.
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Bowen, Joseph E., Norfolk, Va.
Camp Engineering Co., Chicago, Ill.
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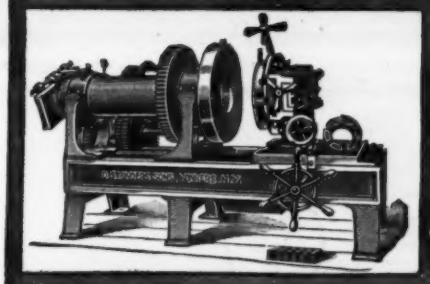

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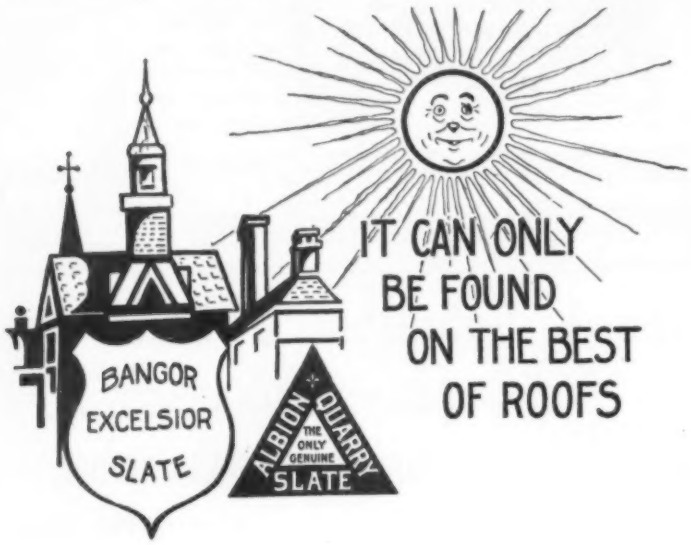

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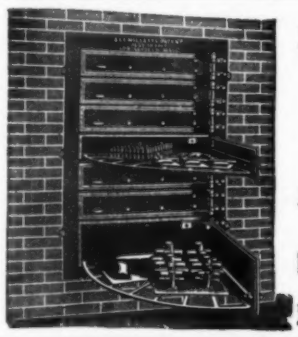

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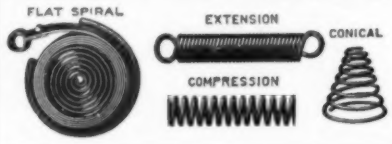

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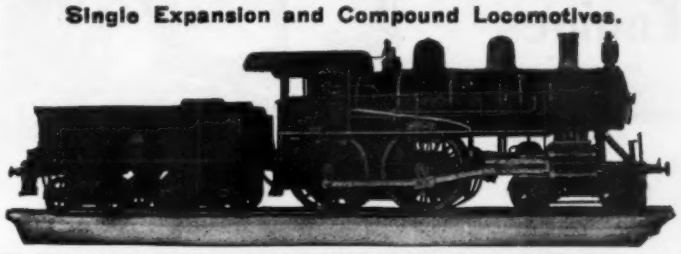

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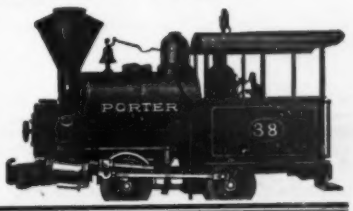

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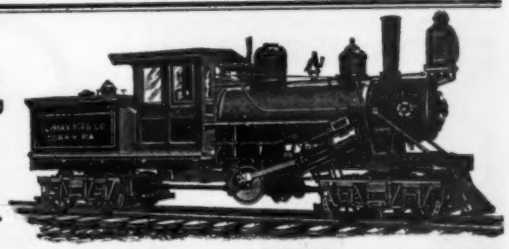

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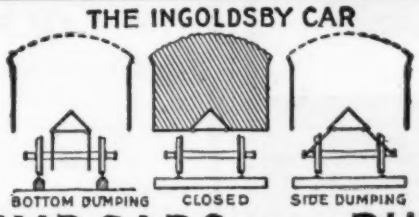

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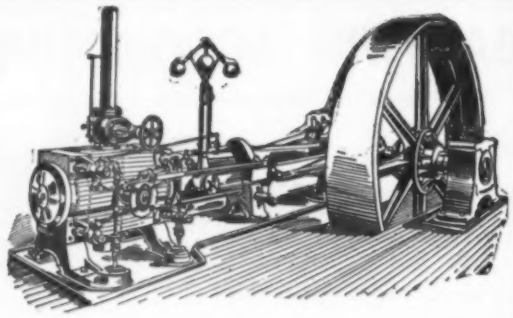

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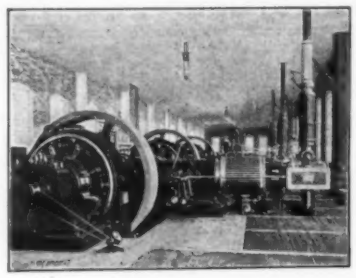

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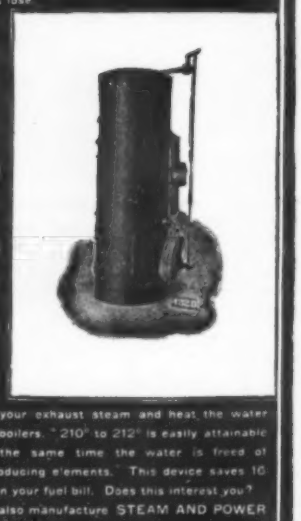

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[See Metal-Working Machinery.

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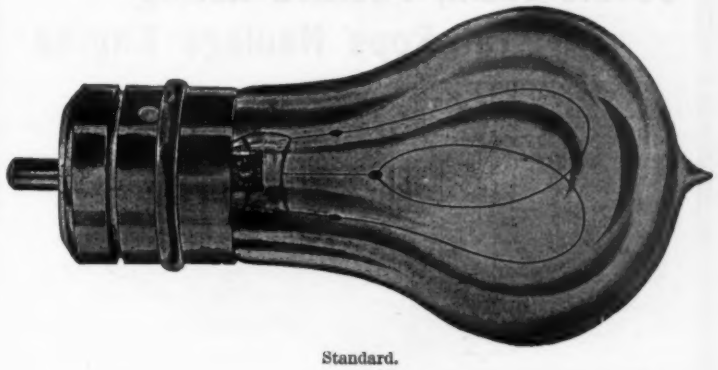

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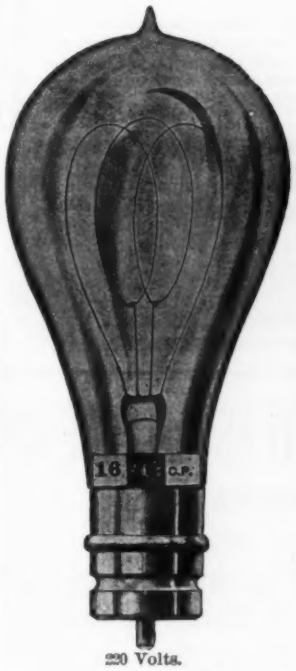

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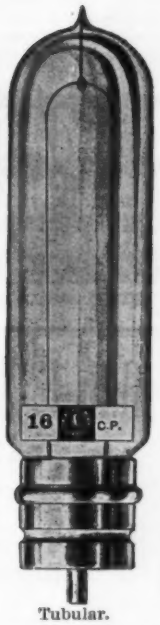

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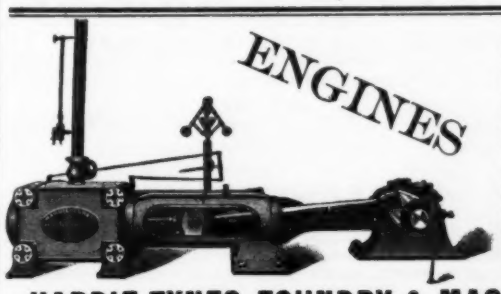

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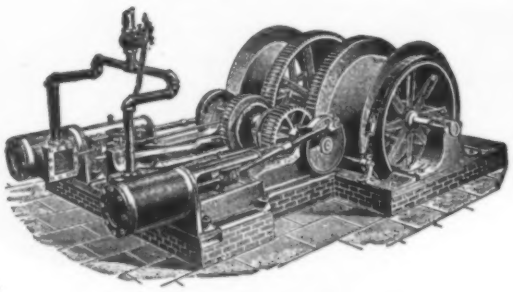
Double-Drum, Positive Acting Tail-Rope Haulage Engine.



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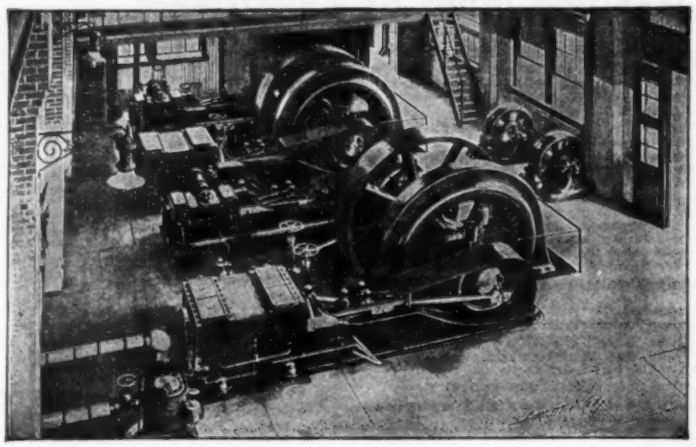

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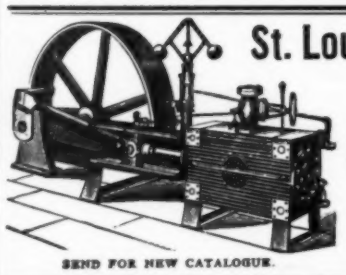

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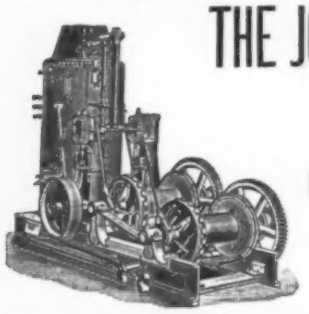

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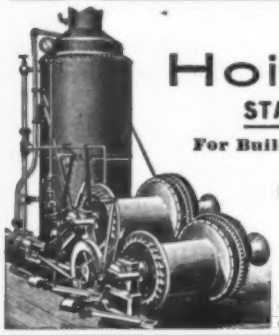

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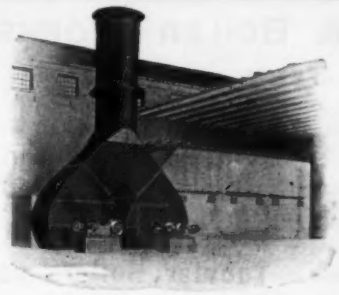

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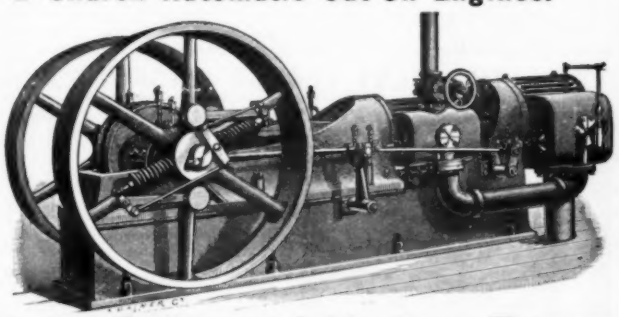

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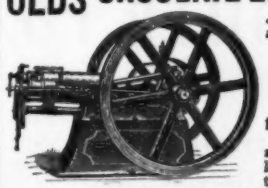

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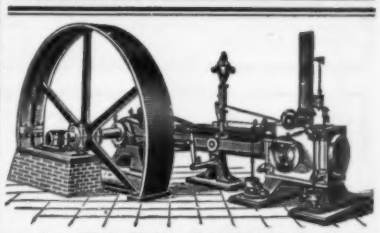

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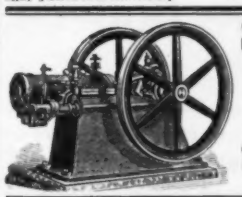

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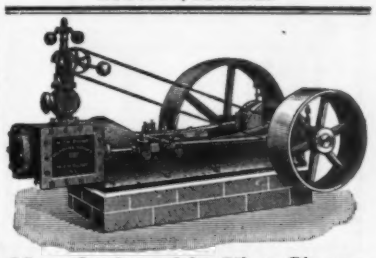

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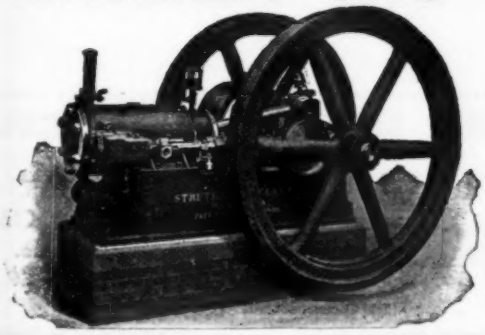

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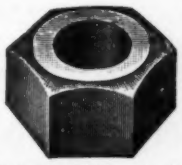

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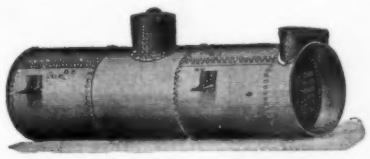

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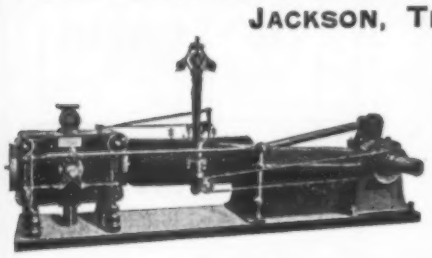

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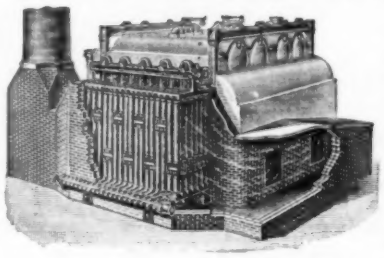

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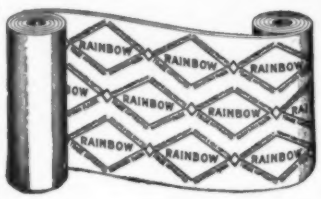

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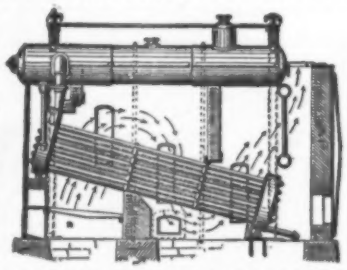

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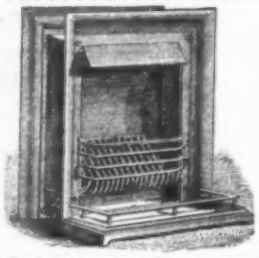

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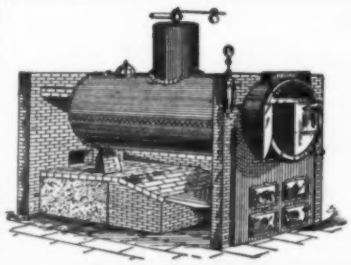

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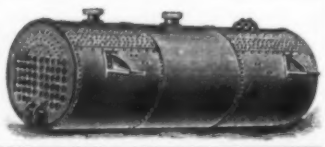

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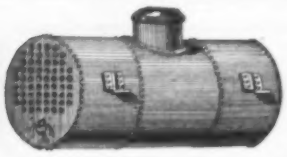

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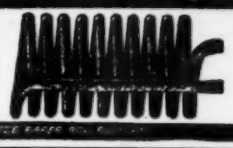

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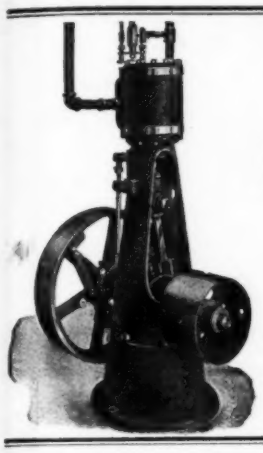

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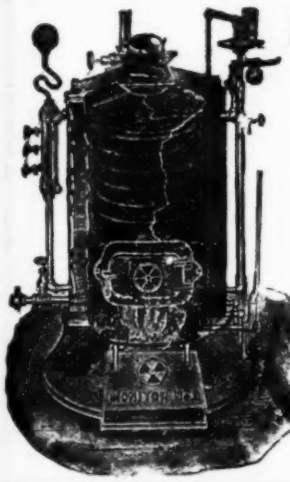

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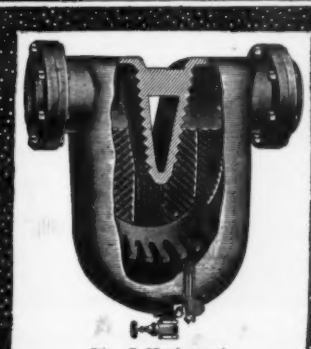

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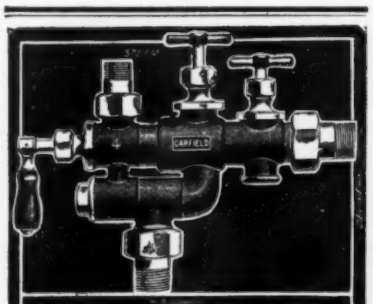

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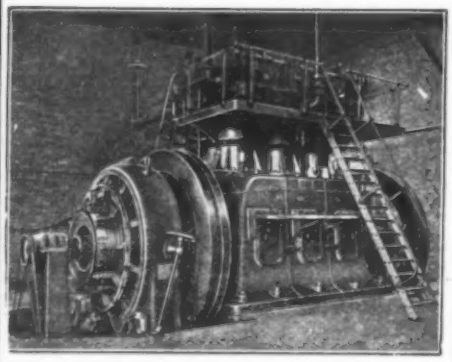

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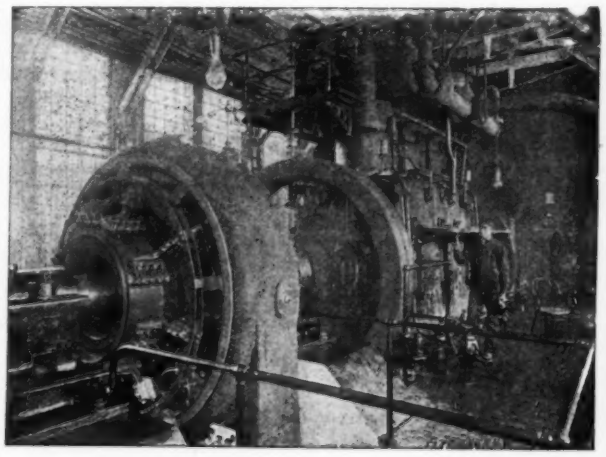

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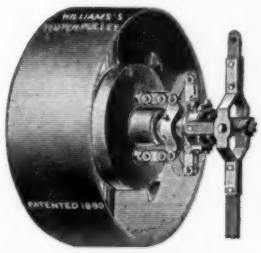

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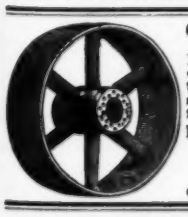

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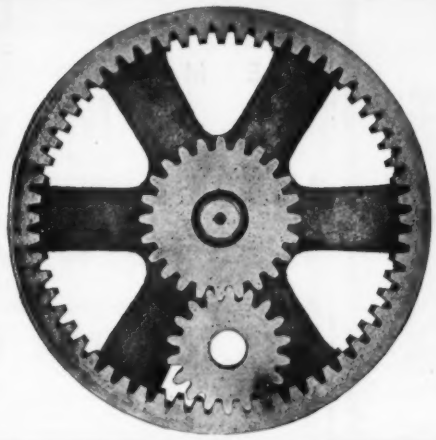

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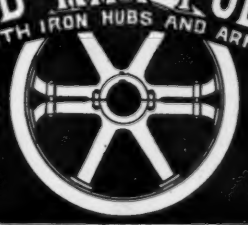

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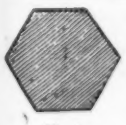

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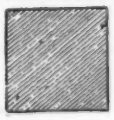

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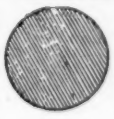

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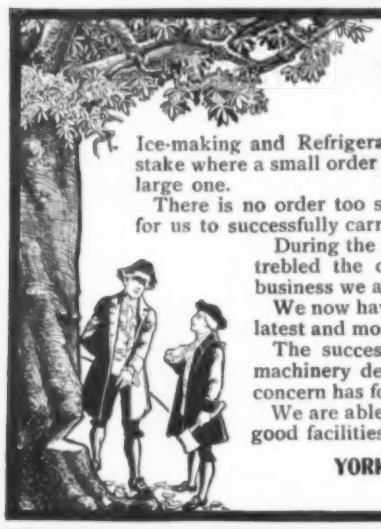

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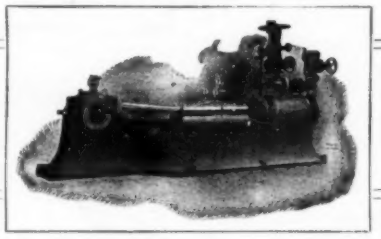

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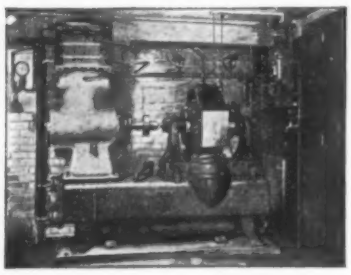

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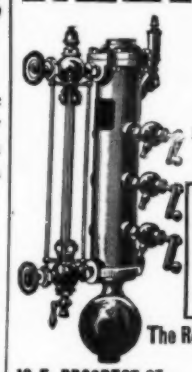

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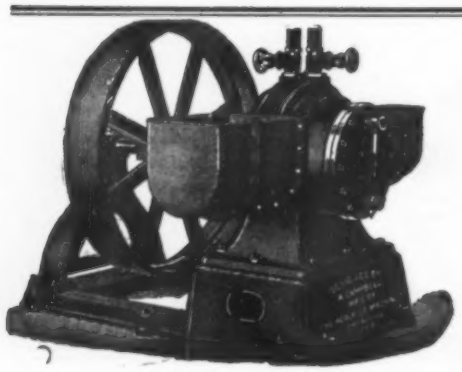

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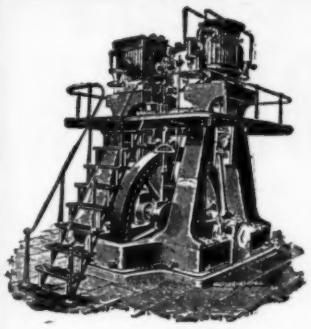

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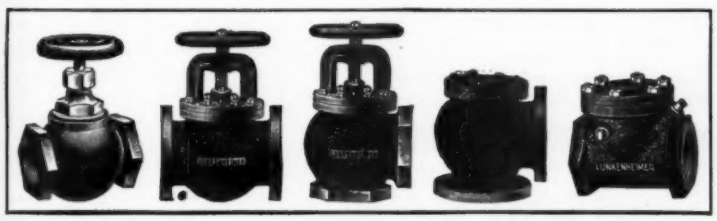

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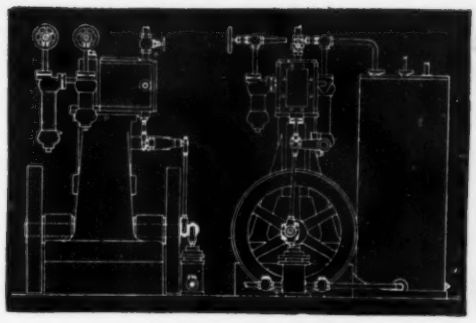

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You have the opportunity and we have the machinery.

We want to fit up a few more Southern mills.

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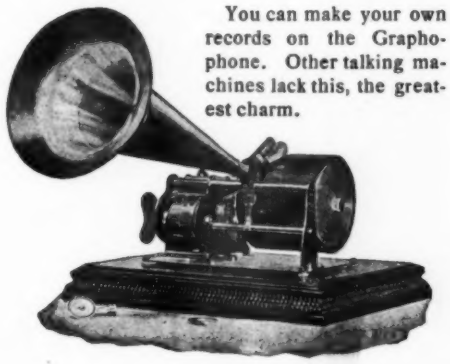

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Important Litigation Relating to Magnesia Covering Patents.

The Keasbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the **Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr** to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50% of magnesia, and especially coverings containing 85% of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

☞ All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. ☜

Beware of Fraudulent so-called "Magnesia" Coverings as well as those infringing on patents.

KEASBEY & MATTISON COMPANY, AMBLER, PA.

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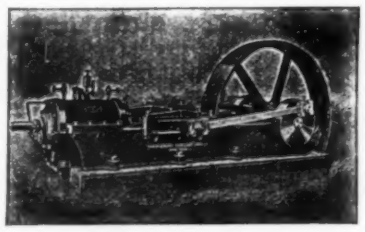

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MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XL. No. 21. WEEKLY. | BALTIMORE, DECEMBER 12, 1901. | $4.00 A YEAR. SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.

OFFICE: MANUFACTURERS' RECORD BUILDING, BALTIMORE.

PUBLISHED EVERY THURSDAY BY THE

Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - - $4.00 a Year.
TO FOREIGN COUNTRIES, - - 26s. 6d a Year.

BALTIMORE, DECEMBER 12, 1901.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

A Reform Demanded.

At the last meeting of the Chamber of Commerce of Knoxville, Tenn., Mayor S. G. Heiskell, as chairman of a committee on industrial education, presented an elaborate report showing the need of just that sort of education in the South. He urged recognition of the fact that it is just as honorable to develop a coal mine as to be a congressman, just as important to construct and operate a textile mill as to be a senator, just as lofty to build a railroad and open the riches of a new section as to hold a judiciary position. But he recognized that public opinion must be brought up to a recognition of those facts so as to impress upon legislative bodies the necessity for providing the proper sort of education—an education which should teach the rising generation of the South that it is just as dignified, just as honorable and just as socially elevating to be an inventor, a machinist, a manufacturer, a manager of a coal mine, a developer of a marble quarry or a builder of a railroad as to follow one of the learned professions. Mayor Heiskell pointed to the work being done already by the University of Tennessee, and expressed a hope that its influence would gradually spread until the whole State should favor practically the newer industrial training.

It is just such speeches as that of Mayor Heiskell which ought to do effective work for the South. He spoke as a practical man dealing with a practical problem. His words, as well as the words of others on the same line, should be given practical support, and the best way of getting this is for individuals who in their own success recognize the advantages of industry to set the example of liberality on the part of legislatures acting for the people of the State by liberality on their own part toward institutions already endeavoring against tremendous odds to meet the increasing demands of Southern youth.

A TWENTIETH ANNIVERSARY PUBLICATION.

The Manufacturers' Record will shortly celebrate its TWENTIETH ANNIVERSARY by a special publication, which will cover the South more fully than has ever been done.

This publication will be separate and distinct from the Manufacturers' Record, though similar in general style and size of page.

The most noted authorities of the country will cover every phase of Southern progress and prospects, and for all time to come this publication will be the standard work of reference on the South and its upbuilding.

In addition to reaching every present subscriber to the Manufacturers' Record, this publication will be widely advertised and widely sold throughout the North and West, and arrangements have been made to give it the broadest circulation among manufacturers and financiers of this country, and to a considerable extent throughout Europe.

We promise to our subscribers and advertisers a unique publication which will more than meet their expectations.

All advertisements for this anniversary publication should reach us as promptly as possible.

TO EDUCATE SOUTHERN WHITE BOYS.

University of Tennessee, Knoxville.
Office of the President.

December 7, 1901.

Editor Manufacturers' Record, Baltimore, Md.:

Dear Sir—I have been very much interested indeed in your splendid paper before the Convention of Southern Cotton Spinners at Atlanta, November 14, entitled "The South's Industrial Task: A Plea for the Technical Education of White Boys." It is a very strong presentation of the importance of technical education in the South. The plan you propose for educating a large body of young men appears to me to be a practical one. I sincerely hope that the manufacturers will take hold of it and carry it out.

Let me suggest that, as soon as you get assurances that the number of the proposed scholarships will be established, you write to the heads of all the technical schools, universities and colleges in the South, especially the State schools having technical courses, and ask them to say what they will do for these scholarship students. Many of these institutions may see their way clear to make some concessions on their side which will materially advance this movement. I know that they are all very poor, comparatively speaking, and are pressed for means with which to pay the necessary expenses of this very costly kind of education, but hope they will all be able to contribute something to the support of this noble movement. Of course, it cannot be expected that they make any contributions to the expenses of individual students, but they may be able to give these students the instruction they seek at a minimum cost. Even in cases where they cannot do this, the heads of the institutions could undertake to manage the expenses of the students, and so help them to make their scholarships go as far as possible.

To put this suggestion in more definite form, I would propose that you send a circular-letter to the head of each such institution asking him to state—

1. What technical courses they can offer in the line of mechanical, electrical, civil or textile education; brief descriptions of these courses, showing the time required, number of hours of practice work, and especially the opportunities for self-supporting work.

2. The amount of tuition and fees regularly charged such students and the expense of living; estimated total expense of a student taking such a course.

3. What concessions can they make to these students, if any? What would the total expense of maintenance of scholarship students in their institutions be? State definitely what it will take to maintain and instruct such a student for the period of one annual session, to include all the necessary expenses except traveling, clothing or pocket money.

With such definite proposals before you you can make a better appeal to manufacturers, and when the scholarships are obtained, can then proceed at once to appoint students and send them to the institutions where they will get the desired education.

It should be distinctly understood that this is not a plan to secure competitive bids from institutions for this class of students, but rather an opportunity for them to help this movement.

It will, of course, give me great pleasure to further this movement in any way in my power, and I believe the board of trustees of the University of Tennessee will do their share towards helping to educate a limited number of the proper sort of students appointed under this plan.

Respectfully yours,

CHAS. W. DABNEY.

The Good Roads Campaign.

The reports from the North Carolina, Tennessee and Alabama places so far visited by the Southern Railway Good Roads Special train show that it has created a great deal of interest in the South, and caused an awakening on the subject of building a better system of common roads. When it was announced that this train would be run over the Southern Railway system, visiting a large number of places on that line, there was every reason to believe that the people of the South would appreciate the enterprise of the president and other officials of the Southern Railway Co. in sending it through that company's territory. The results so far reached are a subject for congratulation, both to the company and to the people of the South. There is no doubt that the greatest transportation problem to be solved by the people of the United States at the present time is that of local transportation of farm and other products over the common roads. The South is in great need of a better system of public highways. With an adequate improvement of their thoroughfares all the States of the South will develop more rapidly than ever before. Persons who have studied the problem of better roads appreciate this fact. The main difficulty is to bring the truth home to the people of the different sections. The Southern Railway Good Roads train is showing not only the best methods of modern road-making, but is now bringing directly to the people of the districts visited an object-lesson of the difference between a bad road and a good road as related to the cost of marketing farm products.

Some of the localities visited by this Good Roads train have heretofore made progress in the direction of improved public highways. Such places are Chattanooga, Tenn.; Birmingham, Ala., and Asheville, N. C. The people of these localities gave enthusiastic welcome to the train, and showed in every way that they appreciated the enterprise of the Southern Railway Co. in sending it out. At each renewed interest was awakened, and the people will go forward in road-making more actively than ever before. At Winston-Salem there had been active agitation, and some work on the part of local citizens and officials toward the improvement of the roads of Forsyth county, and other counties in that section of North Carolina had made a movement in the same direction. Their efforts have been greatly strengthened by the visit of the train to Winston-Salem. One of the most satisfactory visits paid by the train was that to Greeneville, Tenn., which is in a region where little had been done on the part of the people or authorities in providing better roads, and the development of that part of East Tennessee has undoubtedly been retarded because of this lack of road work. The roads in that mountain region are more difficult to make than in most localities of the South. The sample road made at Greeneville, through a

very difficult section, transformed a portion of highway which in the winter months was often almost impassable into a fine piece of macadamized and earth roadway, which was, and will be in the future, a most convincing argument to all the citizens as to the advantage of fine thoroughfares. So enthusiastic did the people become over this short section of roadway that a private subscription was immediately provided for extending it a distance of four miles into one of the best portions of Greene county. At Mobile, Ala., a sample road of excellent quality was completed and made an object-lesson as to the way in which they should improve bad roads in the sandy soil of Southern Alabama. The work at Birmingham and Montgomery has added to the interest already shown at those places, and contributed much to the securing of improved highways throughout the State.

At all places visited by the train Good Roads conventions have been held, and they have been largely attended. Each convention has resulted in the organization of a local and district Good Roads association to co-operate with the State associations and enlist a large number of earnest, enterprising workers in the cause. The officers of the National Good Roads Association, President W. H. Moore and Secretary R. W. Richardson, Director Martin Dodge and Assistant Director M. O. Eldridge of the office of public roads inquiries of the Department of Agriculture, as well as a large number of officials and prominent citizens in each section, have taken part in the conventions, and have done splendid work, arousing public sentiment to the necessity for action in this cause. These conventions and the efficient object-lessons of the road-making train will be productive of wide development in highway construction, which will, in turn, add greatly to all property values, gradually increase the investment of capital in the South and the settling of now vacant farm lands by a good class of citizens from every section of the United States.

Electric Energy from Oil.

Referring to a recent editorial of the Manufacturers' Record suggesting the possibilities in the development of the water-powers of the Piedmont region of the South, the Greenville (S. C.) Daily News makes an exceedingly interesting and practical suggestion regarding the use of the oil supplies at Beaumont and elsewhere. It says that the oil deposits of Texas, Louisiana and California are mainly near the coast, where water-powers are scarce; that the self-flowing wells at Beaumont furnish an apparently inexhaustible supply of fuel, the cost of which is to be measured practically by the cost of packing and transportation to the consumer, in which undertaking great strides have already been made, and with a glance at the utilization of the water-power at Niagara in generating electric energy and distributing it over a wide area, it adds:

> We desire to make a suggestion in this connection which we have not seen advanced elsewhere, and which, with all due deference, we think may add to the value of these petroleum power-houses, so to speak. In other words, we suggest that at Beaumont and other great oil centers immense electric plants be established for the distribution of power to surrounding points within economical reach, as the power of Niagara and other great water-powers are used. With a fuel practically without cost at the source of supply, there is no cheaper mode of generating electrical energy than with the steam engine. Along radii extending out in almost every direction from Beaumont, this power could be cheaply distributed, producing light, operating trolley lines and turning the wheels of hundreds of cotton mills and other manufacturing plants. The possibilities of industrial development opened up by thus utilizing these storehouses of power as distributing points are unquestionably great, and we think the subject is worthy of investigation.

Here is food for thought on the part of the electric engineer, the maker of machinery of all kinds and the manufacturer seeking the best means of obtaining power for industry. Its suggestion by the Greenville News, published in the region where other power is available, is an illustration of that broad-minded Southern spirit which does not keep its eyes fixed upon mere local advantages in industry, but comprehends the whole range of possible Southern endeavor in the knowledge that as the whole advances, so must its parts reap benefits.

Galveston.

In this week's issue the story of Galveston's development of recent years is very graphically told in a special article. With a foreign trade now exceeding $100,000,000 a year, Galveston takes rank as one of the world's leading shipping centers. Despite the overwhelming disaster of the great storm, the people of that city with heroic strength have met and to a large extent overcome the discouraging conditions they faced when it seemed that Galveston had been almost, if not quite, destroyed. But in the special article from that city attention is called to the effort which is being made to secure some abatement of the interest burden on their bonds. There have been but few cases, in the opinion of the Manufacturers' Record, when any community has had the right to ask for a readjustment of its indebtedness to the loss of the creditor, but it would surely seem that Galveston has a right to make such an appeal. With its population so greatly reduced, as it is today, as compared with what it was before the storm, and with so large a destruction of the property of the municipality, as well as of the people, it would seem that equity would fully justify the bondholders of that city in making every effort to meet the views of the finance commissioners of the city.

Sugar and Cuba.

In this issue of the Manufacturers' Record is published an interesting statement by Gen. Leonard Wood, governor-general of Cuba, touching the possible business relations between that island and the South. General Wood has had excellent opportunities to study conditions in Cuba and to realize that the South is peculiarly qualified to meet the industrial wants of the island. His suggestions as to how both the South and Cuba may profit are in the main very practical. But General Wood touches upon one point which, it is believed, the South will be wise in not endorsing. He seems to suggest that the sugar interests of Cuba be cultivated, even at the expense of those of the South, intimating that the loss to the South in this respect would be more than met by the increase of its business with Cuba in food supplies, fuel, manufactured articles, etc. As well as the Manufacturers' Record may perceive, the sugar interests of Cuba are sufficiently strong naturally to enjoy a healthy development without sacrificing those of Louisiana and Mississippi, and without bringing to naught the efforts which are being made to extend the culture of cane in Texas, Florida and Georgia. Plans of reciprocity which contemplate the ultimate destruction of the Southern sugar business should be vigorously contested.

The Negro—The Worker.

Referring to a protest by a certain class of negroes against a piece of statuary designed for the Charleston Exposition because it represents the negro engaged in creative work, the Atlanta Constitution makes the following wise suggestions:

> The negro has made rapid progress during the past generation, but we fail to see wherein the work of the sculptor reflects in any way upon the character of the race. If there is one lesson which our American institutions have taught us more distinctly than another it is the dignity of labor and the nobility of honest toil, for upon them must rest at last the pillars of the world's strength. Without labor and toil there can be no prosperity. Instead of finding fault with the sculptor's work, it seems to us that the negroes should rather applaud it as illustrating an important part they are playing in the economy of our civilization.

As a matter of fact, the value of the negro as a worker is too often forgotten in the midst of the agitation of a problem moving and having its being in the class of negroes who are drains upon their fellows and upon the community at large. The working negro has little time for crime or vice, even were he disposed to it. It is the negro in low politics and equally low religion who is responsible, under the influence of false friends, for much of the trouble out of which the American race problem has grown. At the same time, in irritation because of that problem, persons are not always mindful of the credit due the negro for much of Southern development.

When the population statistics of the census were first published the manifestations of the movements of the negro population thereby revealed excited feelings of pessimism in some quarters. From an analysis of the figures by Edward Ingle, published on another page of this issue of the Manufacturers' Record, it appears that there is much reason for satisfaction in the movement of the negroes during the past ten years, the massing of them in particular localities in the South being regarded as a sign of material development, and the migration of others to States outside the South being rather a gain for the South in more ways than one.

The Appalachian Park.

On another page of this week's issue of the Manufacturers' Record is published a letter from Mr. E. Munsey Slack, editor of the Abingdon Virginian, bearing upon the proposed Appalachian forest reserve, and strongly urging action whereby the reserve may include a portion of the mountain lands of Southwest Virginia. The facts brought out by Mr. Slack are very interesting, but we must suggest that the proposition to establish a great forest reserve in the South ought not to be endangered by considerations of mere State interests. It is so big a proposition and so full of possibilities for good to a great section of the South, and indeed to the whole country, that the various interests concerned in it should sink the desire for minor advantages in the purpose to secure the necessary legislation establishing the reserve. While the Appalachian Park may become a great resort for health-seekers and pleasure-seekers, its great object is the maintenance of the woodlands about the headwaters of many of the important streams running into the Atlantic ocean or toward the Mississippi. That object should be kept to the front.

Better Let It Sleep.

The executive committee of the United Textile Workers, an organization effected at Washington and alleged to represent textile workers in all parts of the country, has urged the passage by Congress of the bill providing for a constitutional amendment establishing a uniform working day in the country. There has been a suspicion all along that the purpose of the new organization was to create an impression that there is a general demand for such an amendment. The workers of the representatives of the textile workers know, however, that that demand is confined to a very small section of the country, and is not supported unanimously there. The proposition for a uniform labor day might as well be dropped, and the real textile workers had as well make it impossible for their easy-living leaders, so-called, to bring matters to such a pitch that they may lose the wonderful advantages which they already possess.

Mississippi Industries.

Secretary of State Powers of Mississippi has compiled a table showing that during the past two years there have been chartered in the State fifteen cotton mills and woolen mills, forty-two lumber-manufacturing companies, thirty oil-mill companies and thirty-eight manufacturing concerns of miscellaneous character. In addition there have been chartered fourteen roundlap-bale companies, twelve railroad companies, ten compress and warehouse companies, nine electric-light and power companies, nine ginning and milling companies, eighteen real-estate, land and improvement companies, one cattle company and five oil companies. These figures indicate that Mississippi has come within the circle of Southern industrial advancement, and is determined to strengthen its position there.

New Orleans is thoroughly aroused over the possibilities of increasing the importance of its shipping interests through the location there of the great floating steel dry-dock built at Sparrow's Point, Md. Referring to this the Daily News of Pensacola, Fla., says:

> New Orleans is certainly entitled to the hearty congratulations of all of its sister cities in the South—first, upon the successful installation of the mammoth steel floating dock at the Algiers naval station, and then upon the safe arrival of the great battleship Illinois, to be used in testing the dock.

Good for Pensacola! That spirit displayed more generally will count much for the advancement of all the Gulf ports.

For the thirty-second consecutive time Col. Henry G. Hester has been elected secretary and superintendent of the New Orleans Cotton Exchange. These successive honors are a well-merited tribute to Colonel Hester's value to the cotton trade of the world generally as an authoritative statistician, and to the New Orleans Exchange, which he has made known in every place where there is trade in cotton.

Gas Plant Wanted.

The town clerk of Johannesburg, in the Transvaal, South Africa, will receive tenders for the supply and delivery of a complete carburetted water-gas plant of a capacity of about 200,000 cubic feet daily. Specifications may be obtained from him, or from the British Colonial Office at London. The tenders must be received by the town clerk before January 31.

TO UNEARTH BURIED TALENTS.

More Vigorous Endorsements of the Plan to Train Southern White Boys Industrially.

With the text, "Up With Our Buried Talents!" the Alexandria (Va.) Times says:

"Before the Southern Cotton Spinners' Association Richard H. Edmonds recently made so powerful a plea for scholarships at industrial schools for our poor white boys that Arnold B. Sanford of Boston at once volunteered to found one, while Hoke Smith re-enforced the Edmonds plan in a stirring speech, full of that hard common sense for which he is famous."

The Times gives a hearty "amen" to Mr. Edmonds' plan, which it quotes, and it adds:

"The hour has struck for action. We should turn our backs on the dreary desert of politics, where for so many years our finest intellects have watered a waste of sand with words, instead of developing the magnificent resources of Virginia—a Commonwealth foremost in natural wealth, but rearmost in making the best use of it. We have exaggerated parable into hyperbole, for it has not been one talent, but ten, which we have been burying in a napkin until the napkin itself has rotted. We must change all this. Instead of wrestling collar and elbow over a few pitiful offices, let us open the way to capital with the farmer's plow and the woodman's axe and the miner's lamp, until the Old Dominion becomes anew what she was in 1789—the richest, most populous and most powerful of the sisterhood of States, and once more the Mother of Presidents.

"How shall we do this? First of all, we must learn our resources. Next, we must marry hand and brain in toil which coins gold out of the markets of trade by changing raw material into finished product. Neither is possible without that knowledge which institutions like the polytechnic supply, for those who furnish capital must understand the value of the gifts of nature which they are asked to render merchantable, or they will not adventure, while their cash will be worthless unless those who are to use it are, in their turn, skilled in the various industrial processes needed in such development. Let us agitate, then, for industrial schools in every city and county. Let us fight for appropriations to support them. Let us add what each of us individually can spare, and such sums as we can prod up the wealthy citizens and the great corporations to the point of contributing. If, in addition, we can induce all Virginians to forget the false pride of indolence and to remember the true dignity of honest toil until they become filled with the spirit of the old couplet—

"'When Adam delved and Eve span,
Where then was the gentleman?'—

we shall have fewer lawyers who flunk, fewer merchants who fail, fewer doctors who kill, and more stalwart men of brawn and brain who accomplish something for themselves and their fellows in the world of physical wealth, to say nothing of this—that we shall be spared the shame of sending to New England for skilled captains of industry to direct the ranks of unskilled labor, which are filled by the splendidly-endowed but poorly-educated sons of the South."

Says the Southern Industrial Review of Greensboro, N. C., on the same line:

"The Review possesses to a large degree the virtue of optimism. This comes both by reason of its own nature and by the logic of conditions. All well-regulated, healthy, normal individuals are optimists. Pessimism is a disease due more to subjective causes than to objective conditions. So it is with a periodical or newspaper which reflects the character of the individuals who make it. The Review is young, robust, aggressive, happy. Therefore it looks on the bright side by nature. But it is also compelled to hopeful views by reason of the conditions which it observes throughout the territory in which it circulates. It sees large amounts of capital employed in developing the richest natural resources ever bestowed upon any section, and more capital following in each year; it sees everywhere diversified industries being multiplied and labor offered employment in ten ways where it formerly found but one, and that affording a scanty sustenance; it sees everywhere comparative tranquillity, energizing ambition and prosperity—why should it not be a rank optimist? It is a self-composed one. But there is greater cause yet unmentioned—the breadth and magnanimity of our leaders. Without a knowledge of that broad spirit, who could have made such a suggestion as that striking one put forth by Mr. Richard H. Edmonds, editor of the Manufacturers' Record, before the Southern Cotton Spinners' Association at its Atlanta meeting? The Review readers who had not the pleasure of hearing Mr. Edmonds' interesting address have since read it entirely or extracts from it, and hence know what he said. Still the plan is so large, so far-reaching in its results, so big in potentiality, so worthy of the men to whom addressed, that it will bear elaboration over and over without becoming unprofitable. Some quotations are made room for here. After showing the need for industrial training and the potentialities of the poor white boys of the South, and the inadequacy of the opportunities furnished them, Mr. Edmonds suggests that an endowment of scholarships in Southern schools should be made for the development of our raw brain and muscle material.

"We have called this suggestion Mr. Edmonds' fine idea. Could anything be better? He says that cotton-mill men, by reason of their influence and ability to do so, should be the leaders in this practical plan, combining at once so much philanthropy and real self-help. It is true. Our mill men have reached the point where they can afford to be generous, to invest largely in the raw human material about them."

The American Ginner and Cotton Reporter of Meridian, Miss., says:

"In his address before the Southern Cotton Spinners' Association at Atlanta, which was printed in full in the last issue of the American Ginner and Cotton Reporter, Mr. Richard H. Edmonds, the editor of the Baltimore Manufacturers' Record, emphasized an argument which this paper has sought to enforce through five years in its pleading for both the industrial and technical education of the young men of the South.

"Mr. Edmonds comes forward with a plan that is entirely practicable, and which it is not necessary here to quote in full, the gist of which is that the industrial enterprises of the South should combine for the creation of scholarships for technical instruction for the poor boy, either by the creation of new schools or the endowment of those now working in this behalf, requiring the beneficiaries of these endowments to make return through instalments, after graduation, out of their wages, for the instruction which they have received, thus keeping the original endowment intact and complete.

"It would not require much sacrifice on the part of the manufacturing interests of the South to get together on Mr. Edmonds' proposition and procure the education, as he suggests, of a thousand recruits annually in this industrial service, which is becoming the important service of the new generation.

"The American Ginner and Cotton Reporter has long contended for manual training in the public schools, as well as technical instruction in the higher schools, as the best means for the equipment of the new generation for the battle of life which they must face. Our contention has been that we should strive to make useful every faculty which the child may possess. And the public schools ought to be made the test and the development of these talents or faculties if it is desired to procure the best results hereafter.

"It may be demonstrated, for instance, that one has no talent for carpentry, another no inclination for literature, another no disposition for mathematics, but none are hurt by the handling of tools to test their capabilities. All that is asked is to give the natural mechanical talent a chance in our common schools and promote them to higher when the opportunity occurs."

The Wheeling (W. Va.) Intelligencer says:

"Mr. Edmonds, the editor of the Manufacturers' Record of Baltimore, in his plea for the industrial education of the poor white boys of the South, which he made some weeks ago before the Southern Cotton Spinners' Association in Atlanta, has great reason to be encouraged in the plan he outlined, if we may judge from the cordial approval of his scheme by the press of the South. It is time the white people of the South were waking up. If the colored people see this necessity in the Tuskegee Institute and the Hampton school, how much greater is the need of industrial education among the poorer white people, a class strangers to the new condition of things in that section of the country?

"Mr. Edmonds' address was a strong plea for the technical education of the white boy of the South, who, he said, was the greatest of the raw products, with possibilities unlimited. In a comparative review Mr. Edmonds disclosed the wonderful resources of the South—her cotton making white the fields, her mines of iron, coal and lime, her wealth in forest growth and her illimitable water-power, any one enough to form the backbone of a great nation, but after all has been said, the greatest resources of all—the white boy—has been neglected.

"This conclusion is reached because of the lack of that education which will fit the boys and young men for taking charge of the South's factories and managing them, instead of having to import experts to fill these places, leaving the menial positions to be supplied by home talent."

PROGRESS AT SOUTHERN PORTS. X--GALVESTON.

By C. W. Hayes, Manager Texas Associated Press Bureau.

[Written for the Manufacturers' Record.]

"Actions speak louder than words." Actual achievements, however, are more convincing than either. Gauged by the latter standard, Galveston has a luminous record, and this is forcibly illustrated in her commercial progress of the past seven years. However, before entering upon a statistical review of her trade, it is well to enumerate the arteries that feed, sustain and augment this trade from year to year, until it has reached its present proportions, and promise greater expansion in the future.

The railway lines terminating at Galveston, which have been potent factors in the city's advancement and commercial progress, are the Gulf, Colorado & Santa Fe; the Southern division of the Atchison, Topeka & Santa Fe, whose initial point is Chicago and its termini Galveston and San Francisco; the Missouri, Kansas & Texas, beginning at St. Louis, ramifying the fertile West and Southwest and terminating at Galveston; the International & Great Northern, an important link in the Gould railway system, with its spider-web of tracks penetrating the most fertile regions of Texas, having its Southwestern terminus at Laredo, there connecting with the Mexican National system, and its Gulf terminus at Galveston; the Southern Pacific, with its great ramification of tracks, extending throughout the Pacific slope, spanning Arizona and New Mexico, and its lines, like the tentacles of an octopus, reaching into almost every corner of Texas, is the latest and most important acquisition to the railway systems that find an ocean outlet at Galveston.

All these great lines have valuable terminals here. During the life of President Huntington the Southern Pacific acquired 200 acres, with a channel frontage between Forty-first and Fifty-first streets, in the western part of the city, which is being rapidly reclaimed, filled in, and a fine system of terminals is being constructed thereon, which, when completed, will cost over $2,000,000, and will embrace the largest and most complete system of wharves on the Gulf coast. Seven hundred thousand dollars, outside of the purchase money of $200,000, has already been expended in improvements. Two large piers, affording berthroom for ten large steamers, are already completed, covered by immense sheds, over which freight is now being received and delivered. A large power-house and electric-light plant and a 1,000,000-bushel grain elevator are being erected at a cost approximating $250,000. When the power-house and electric-light plant are completed, enabling the company to handle their great through traffic with dispatch, the Southern Pacific will put on a swift line of steamers to ply between Galveston and New York. This consummation is looked for by the first of the coming year, and will be an important factor in augmenting the trade and importance of this port. The Southern Pacific has a channel frontage of 3800 feet, which, when equipped with piers, will furnish ample berth-room for forty-seven large steamers, and will have a track capacity for 2500 cars.

The Galveston, Houston & Henderson Railway, between here and Houston, operated partly by the Missouri, Kansas & Texas and the International railways, and the Galveston, Houston & Northern, extending from Galveston to Houston, and owned and operated by the Southern Pacific, are also important factors in the commercial advancement of Galveston. The Gulf & Interstate Railway, which ran from Port Bolivar to Beaumont, there connecting with the Kansas City Southern and other lines penetrating the lumber, mineral, oil and agricultural regions of East Texas, was becoming quite a factor in the city's trade. But since the fateful storm of September 8, 1900, totally destroying twenty-seven miles of is track-

age and much of its rolling stock, its usefulness has ceased, so far as Galveston is concerned. Since the marvelous development of oil at Spindle Top and the extensive culture of rice in the East Texas coast country steps for its reconstruction are being seriously considered, and in all probability inside of a year it will pass out of its receivership into strong financial hands and be thoroughly reconstructed and equipped.

Thus over 71,000 miles of railway west of the Mississippi river is now connected with the railways having their termini at Galveston. Texas has over 9000 miles of railway which can quickly transport the surplus products of this vast territory to the steamers' side at Galveston with profitable advantage to the producers. Ocean rates being practically the same between Galveston, Liverpool and other European ports as from New York, and the rail haul less, has done much in the past few years in diverting outbound traffic to the port of Galveston.

Galveston's maritime traffic has kept pace with her inland traffic, and has done its full share in augmenting the importance of this port. In the last few years regular liners have taken the place of "tramps." Today Galveston has sixteen regular lines of steamers plying between this and European ports, all of which have agencies here. Some are weekly, others bi-monthly and monthly sailings. These are the North German Lloyds, bi-monthly to Bremen, carrying freight and passengers; Gulf Transport Line, sailing every ten days to Liverpool and once a month to Havre, carrying freight and passengers; the Harrison and Booth lines, freighters, sailing monthly to Liverpool; Frederick Neyland & Co. (Limited), West India and Pacific branch, monthly to Liverpool; the Hamburg-American, monthly to Hamburg; the McVitie Line, monthly to Havre; the Larrinaga Line, monthly to Manchester; Castle Line, every twenty-three days to Antwerp; Hogan Line, monthly all the year round to Havre; Houston Line, monthly nine months in the year to Liverpool; the Texas and European Line, weekly to Havre, Bremen, Rotterdam and Antwerp; the Serra Line, monthly to Liverpool; the Creole Line, monthly to Genoa and Mediterranean ports; the Dania Line, monthly to Danish ports; the Elder, Dempster & Co.'s line, regular monthly service to Liverpool, Havre, Bremen and other continental ports; the Nicaragua Steamship Line, weekly, engaged in the tropical fruit trade between this city and Nicaraguan ports; Charles F. Orthwein & Son Steamship Agency, which during the season dispatches vessels laden with grain, cotton, etc., to continental and Mediterranean ports. The Mallory Line, bi-weekly between this port and New York, touching at Key West; the Pensacola Line, weekly, engaged in the coal traffic, and a schooner line between here and Point Isabel, make up the lines engaged in the coastwise trade.

Outside of the regular foreign liners, there is quite a large number of tramp steamers under charter that come here and are dispatched with cargo during the grain and cotton season.

Each year sees an increase in the size and tonnage of steamers coming to this port. The average tonnage now is about 2200 net. Five years ago the average did not exceed 1500 net. This is due to the permanency of deep water upon the bar, secured by the construction of the jetties at a primal cost of $7,180,000. Since the completion of the jetties the average depth of water on the bar at mean low tide is twenty-six feet, an increase of fourteen feet from its original depth. With the inner channel, fronting the wharves, widened 1200 feet and dredged to the depth of thirty feet, Galveston will have the finest harbor in the country. According to the estimates of the United States engineers, an expenditure of $1,500,000 will accomplish this, and Congress at its next session will be asked to appropriate this amount. Galveston has abundant available wharf room to accommodate the commerce of the North and Northwest for the next 100 years without anybody being in the least crowded. She has a greater aggregate of wharf frontage than the city of New York when made available, which will be done as rapidly as the demands of commerce require. Her wharf facilities now will readily afford loading facilities for 100 steamers, and on these wharves are located three grain elevators with a combined capacity of 3,000,000 bushels. There is now over five miles of wharfage equipped with all modern improvements for the expeditious handling of freight, and having a track capacity for 9600 cars.

Having given the arteries that feed, nourish and constantly augment the trade of Galveston, the capacity of the city to handle this commerce is the next consideration. To supply the sinews, Galveston has two national and nine private banks, whose business, as represented by the Galveston Clearing-House for the year beginning September 1, 1900, and ending August 31, 1901, amounted to $360,359,000, compared with $339,624,850 for the preceding year.

The following statistical statement of the extent of exports, compiled from the records of the custom-house for the past seven years, commencing September 1 and ending August 31, respectively, illustrates very forcibly the magnitude of Galveston's maritime commerce:

Cotton.

Years.	Bales.	Pounds.	Value.
Total, 1900-01..	1,699,197	902,884,174	$82,093,982
Total, 1899-00..	1,590,259	831,891,011	63,271,221
Total, 1898-99..	2,028,483	1,078,485,696	57,663,921
Total, 1897-98..	1,513,815	803,364,307	46,714,156
Total, 1896-97..	1,233,052	652,631,527	47,486,467
Total, 1895-96..	746,952	397,727,228	31,739,423
Total, 1894-95..	1,349,059	717,840,920	38,949,296

Cottonseed Cake and Meal.

Years.	Pounds.	Value.
Total, 1900-01.....	481,749,531	$4,861,043
Total, 1899-00.....	432,104,874	4,162,942
Total, 1898-99.....	550,465,484	4,650,991
Total, 1897-98.....	496,467,998	4,284,039
Total, 1896-97.....	310,492,948	2,824,948
Total, 1895-96.....	207,790,667	2,086,721
Total, 1894-95.....	246,940,443	2,281,973

Cottonseed Oil.

Years.	Gallons.	Value.
Total, 1900-01.....	5,004,747	$1,518,127
Total, 1899-00.....	7,277,933	2,183,446
Total, 1898-99.....	7,969,700	1,701,222
Total, 1897-98.....	6,222,908	1,529,176
Total, 1896-97.....	3,419,179	890,716
Total, 1895-96.....	1,179,512	380,396
Total, 1894-95.....	142,469	41,784

Total Exports of Cotton, Etc.

1900-01.....	$8,373,152	1896-97.....	$51,202,131
1899-00.....	69,621,307	1895-96.....	34,206,540
1898-99.....	64,016,134	1894-95.....	41,273,053
1897-98.....	52,527,371		

Wheat.

Years.	Bushels.	Value.
Total, 1900-01.....	14,010,378	$10,310,613
Total, 1899-00.....	13,531,839	9,327,904
Total, 1898-99.....	13,689,163	9,613,147
Total, 1897-98.....	10,619,995	10,137,729
Total, 1896-97.....	3,499,482	2,117,796
Total, 1894-95.....	53,055	29,930

Corn.

Years.	Bushels.	Value.
Total, 1900-01.....	100	$50
Total, 1899-00.....	8,094,791	2,900,979
Total, 1898-99.....	3,411,745	1,289,733
Total, 1897-98.....	4,761,616	1,870,054
Total, 1896-97.....	6,059,602	1,995,139
Total, 1895-96.....	4,880,748	1,541,278

Flour.

Years.	Barrels.	Value.
Total, 1900-01.....	120,357	$422,489
Total, 1899-00.....	239,982	885,422
Total, 1898-99.....	119,951	466,115
Total, 1897-98.....	154,007	730,569
Total, 1896-97.....	50,197	193,692
Total, 1895-96.....	47,907	177,949
Total, 1894-95.....	66,921	233,442

Total Exports of Breadstuffs.

1900-01.....	$10,738,507	1896-97.....	$4,306,697
1899-00.....	13,132,046	1895-96.....	1,733,038
1898-99.....	11,435,986	1894-95.....	268,755
1897-98.....	12,809,841		

The increases in the value of other exports in the seven years were as follows:

Lumber, timber and manufactures of, from $203,418 to $1,035,572; lard, $24 to $5144; bacon and hams, from $74 to $110; metal manufactures, from $354 to $5653; soap and soap stock, from $8420 to $13,150; live-stock, from $297 to $49,640, there being variations in the intervening time, live-stock, for example, having advanced from $295,572 in 1897 to $669,331 in 1900, metal manufactures having reached a total of $154,634 in 1899 and zinc and lead having advanced from $889,982 in 1897 to $1,033,629 in 1900, and salt and canned beef, the decline in 1900-1901 being, of course, but temporary, and due to the disasters of 1900.

An idea of Galveston's importance as an importer may be had from the following figures of the value of imports in 1899-1900:

Fibers and manufactures of, $648,969; cement, $186,434; coffee, $285,267; fruits and nuts, $5562; sugar, $13,515; chemicals, $50,299; fish, $13,887; wines and liquors, $30,206; glass, $11,418; iron and steel, $4093; cotton goods, $11,842; earthenware, $33,347. In that year also goods were transshipped without appraisement to interior cities to the value of $16,583.

The extent of Galveston's outward coastwise trade is shown by the values of the following-named goods moved in 1899-1900:

Cotton, 242,100 bales; oil, 9673 barrels; lumber, 68,391 feet; cement, 69,500 sacks; hides and skins, 3968 bales; lead, 16,571 pigs; wool, 15,703,082 pounds; borax, 15,149 tons; flour, 42,730 sacks, and general merchandise, 85,733 packages.

Other commodities shipped during the year to New York were 200 barrels wine, 200 sacks paper, 300 bars bullion, 15,325 cases canned goods, 325,000 bushels wheat, 800 sacks rice, 1500 sacks beans, 6000 sacks fertilizer, 1642 sacks pecans, 178 bales tobacco, 8157 bales ixtle and zeicatan, 509 sacks leather, 950 sacks bones, 2160 sacks bone meal, 6900 sacks cottonseed meal; to Corpus Christi, 200 bundles cotton ties, 100 rolls bagging, 200 bundles iron pipe; to Brownsville, 500 sacks rice.

The inward coastwise movement includes principally coal from Pensacola, Baltimore, Norfolk, Newport News, Philadelphia and Perth Amboy. These coal imports have increased during six years from 117,370 to 123,095 tons.

The following consolidated statement of the tonnage movement, both foreign and coastwise, for the past seven years gives succinctly the maritime importance of Galveston:

	Entered.					
	Foreign.		Coastwise.		Total.	
Year.	No.	Tons.	No.	Tons.	No.	Tons.
1900-01....	275	590,866	227	407,096	502	997,962
1899-00....	350	665,522	248	398,181	598	1,063,703
1898-99....	452	818,573	240	340,480	692	1,159,058
1897-98....	381	673,375	248	400,570	629	1,073,945
1896-97....	298	490,197	226	329,680	524	819,877
1895-96....	207	275,437	305	340,348	512	615,785
1894-95....	240	354,444	366	386,616	606	741,060

	Cleared.					
	Foreign.		Coastwise.		Total.	
Year.	No.	Tons.	No.	Tons.	No.	Tons.
1900-01....	330	690,032	183	316,847	513	1,006,879
1899-00....	401	748,634	195	299,353	596	1,047,987
1898-99....	493	879,546	216	286,352	709	1,175,898
1897-98....	419	705,465	228	363,143	647	1,068,608
1896-97....	310	510,677	210	289,652	520	800,329
1895-96....	185	298,475	250	311,314	435	609,789
1894-95....	243	357,086	287	320,898	530	677,984

When it is stated that most of the steamers now engaged in Galveston's foreign trade are above 3000 tons, it will be readily understood that the tonnage will run ahead of the number of steamers.

The average size of steamers in the coastwise trade has undergone a marked change in the past seven years. In 1894-1895 the average size was 1118 net tons, while that of the year just closed was 1731. A largely-increased coastwise tonnage is expected during the coming year, when the Southern Pacific will put on a bi-weekly line of steamers between this port and New York.

The following comparison of 1900-1901 with the preceding year will show how rapidly Galveston recuperated from the direful effect of the storm. Galveston's bank clearings for the year commencing September 1, 1900, and ending August 31, 1901, amounted to $360,395,000, compared with $339,624,850 for the preceding year.

Galveston's total cotton receipts for the year commencing September 1, 1900, and ending August 31, 1901, were 2,710,263 bales, compared with 1,710,263 bales for the preceding year. It is estimated that Galveston lost the handling of 600,000 bales by reason of the storm. As it was, she handled 57.37 per cent. of the Texas crop, compared with 74.76 per cent. the previous year.

Galveston's total domestic exports for the year 1900-1901 were $101,831,747; total imports, $957,067. Total coastwise and foreign exports from Galveston for the same period amounted to $246,567,247, as compared with $218,884,512 for the preceding year. The total foreign imports for the year were $957,067, compared with $1,452,737 for the preceding year, a decrease of $495,670.

The value of Galveston's exports for the year 1900-1901 was $16,225,000 greater than the value of foreign exports for the preceding year, and for the first time in the history of the port the value of Galveston's exports exceeded $100,000,000.

The coastwise trade for the year 1900-1901, but for the storm, would have been a record-breaker; 336,617 bales of cotton were shipped during the season, against 242,100 the preceding year; 122,095 tons of coal were received, compared with 122,032 tons the previous year; 1,119,749 packages of merchandise were received, against 1,046,145 packages the previous year.

Stunned and paralyzed as was Galveston with the awful disaster of September 8, 1900, the city's upbuilding and progress has been no less remarkable than the restoration of its lines of trade and commerce. The following exhibit of expenditures up to September 1 forcibly tells what has been done toward the rehabilitation of the city since the storm's destructive visitation. The expenditures are as follows:

Building and repairing homes.....	$940,000
Repairing wharves and shipping facilities.....	1,350,000
Repairing and rebuilding church property.....	86,800
Repairing and rebuilding mercantile buildings.....	345,600
Repairing and rebuilding public buildings.....	35,000
Repairing manufacturing plants....	148,000
Repairing municipal property.....	27,000
Repairing convents, asylums, hospitals, etc.....	224,000
Repairing United States property...	95,000
Repairing telegraph and telephone and railways, etc.....	373,000
Repairing school property.....	50,670
Total expended.....	$3,695,170
Improvements decided upon and under way.....	1,955,000
Grand total.....	$5,650,170

At the last session of Congress $992,000 was made available for the restoration of the forts and batteries located here, and this work is now in progress under the direction of Captain Riche and an able corps of United States engineers. The Congress that is soon to convene will undoubtedly appropriate the $1,500,000 asked for and recommended by the United States engineering department for the repair of the jetties; also the $1,500,000 to widen the inner channel in front of the city 1200 feet wide and twenty-five feet deep, the dredging to be used in raising the grade of the city beyond the danger point in case of an overflow by water. A sea-wall is also in contemplation, and the city commissioners have engaged a board of engineers, the head of which is Col. H. M. Roberts, now on the retired list of the army, to devise plans for a sea-wall that will protect the city from future inroads by the Gulf. The State has remitted its taxes for the next two years, which are to be applied by the city commissioners for paying for filling in of the city.

The broken threads of the manufacturing enterprises which were disrupted by the storm will be woven together soon after January 1, 1902, when the cotton-bagging mills and the rope and twine factory will be placed in operation. Negotiations are now pending for the sale of the machinery in the Galveston Cotton Mills, which employed 700 operatives, and closed down just seven days before the storm. The roof was blown off the building and machinery somewhat damaged. If the machinery can be sold the company will be reorganized and the building converted into a sugar refinery, which, it is thought, will be more profitable than the manufacture of cotton fabrics, as the plant will only be fifty miles away from the most productive sugar lands in Texas, or, for that matter, in the South.

Cheap fuel being an assured fact by the marvelous output of oil in the Beaumont field, will stimulate manufacturing enterprises here, as well as throughout Texas, and bring about the conversion of the raw material into the finished product where it is produced, and inaugurate a new era of prosperity in Texas and Galveston.

Among the most important and profitable manufacturing enterprises now in operation in Galveston are the Texas Star Flour Mills, which exports large quantities of flour to West Indies and Europe, besides supplying a large domestic trade. The Galveston Brewing Co. is compelled to run their large up-to-date brewery night and day to supply the trade with its brews, which have achieved an enviable reputation. Both of these plants, besides the Brush Electric Light & Power Co. and several lesser manufacturing plants, are using Beaumont oil for fuel.

The International Development Co., composed of Galveston and St. Louis capitalists, with a paid-up cash capital of $2,500,000, owning eight gushers on Spindle Top and other proven oil territory there, is arranging the preliminaries to build a pipe line from Spindle Top to Port Bolivar, opposite the city, where it will erect large reservoirs for the purpose of not only supplying this city with cheap fuel, but exporting it, for which it has contracted with a large English steamship company to supply the foreign market. A number of other enterprises are on foot, which, when they materialize, which they will, will tend largely to enhance the prosperity and trade of this city.

The city's financial condition is as follows:

Total bonded debt September 1, 1901.	$3,943,000
Floating debt September 1, 1901.....	186,000
Total debt.....	$4,129,088
Sinking fund, etc.....	1,275,760
Net debt, less cash in various funds.	$2,853,308

The taxable values for assessment in 1900 were: Real estate, $23,691,383; personal property, $3,269,129; total assessed valuation, $26,960,512; rate of taxation, $1.50 ad valorem, twenty cents for schools; total, $1.70 per hundred. The taxable values for assessment in 1901 are: Real estate, $18,437,908; personal property, $2,989,512; total assessed valuation, $21,427,420; rate of taxation, $1.57 ad valorem, twenty cents for schools; total, $1.77 per hundred. The bonded debt draws 5 per cent., payable semi-annually, payable in New York or Galveston, the principal and interest to be paid in gold.

In consequence of at least one-fourth of the taxable values of the city having been totally wiped out and the remaining portion being greatly depreciated in value by the storm, the city commissioners are trying to get the bondholders to refund the present outstanding bonds at a lower rate of interest, say, 3 or 3½ per cent. instead of 5 per cent. Negotiations to this effect are now pending. The city commissioners, as well as the most substantial citizens, declare that the city's debt, bonded and floating, will be paid in full. They think, however, that the city and her taxpayers are entitled to easement in a lower rate of interest from the boudholders on account of a calamity for which the citizens were in no wise responsible, and seriously impaired the municipal ability to pay.

In addition to the sinking fund as given above, the city's assets are: $622,000 of Galveston Wharf Co.'s stock (the income of which is pledged to secure its limited debt 5 per cent. bonds), a water-works plant valued (before the storm) at $1,550,000, an electric-light plant, sewer plant, etc., all of which were badly damaged. The total value of the city's assets prior to September 8, 1900, were $3,306,800. Conservatively estimated, they are 33⅓ per cent. less today, while taxable values have fully depreciated that much, if a correct assessment has been made.

The population of the city in 1900 (United States census) was 37,789. Its population, estimated, now is about 25,000.

Disasters test the mettle of cities as well as men. Those who emerge from their misfortune and achieve fame and distinction deserve praise and honor. Judged by this standard, Galveston presents a luminous record for sublime courage, undaunted determination and an abiding faith in the stability of their city and its future greatness and prosperity. For this her united citizenship stands.

WHAT CUBA CAN DO FOR THE SOUTH.

Gen Leonard Wood, Military Governor of the Island, Tells of Southern Opportunities for Business With It.

By D. Allen Willey.

[Written for the Manufacturers' Record.]

Gen. Leonard Wood, military governor of Cuba, has been in the United States a few days, called by the President in connection with affairs on the island. It is hardly necessary to refer to the position General Wood occupies in the rehabilitation of Cuba. Going there with his regiment as an officer of the United States military service, he remained at the direction of the government to carry out a work which has attracted widespread attention. After assisting to free the Cuban people from Spanish rule, he next devoted his energy and ability to rescuing them from the annual ravages of yellow fever by introducing preventive measures, which have resulted in practically stamping out the disease in Havana and the other large cities. He has traversed nearly every portion of the island, studying its natural resources, investigating possibilities for agriculture, commerce, manufacturing, has made a study of the moral and mental needs of the people, and has established a system of municipal and general administration which has wrought a wonderful change for the better—in the estimation of Americans who have visited the island and impartially judged the results of his labors.

The plans carried out by General Wood were largely of his own conception, as he was given carte blanche by the late President McKinley in methods for the general betterment of both country and people.

Appreciating the really vital interest of the relations of the Southern States to Cuba, General Wood has given his views in detail for the Manufacturers' Record on what Cuba means to the South from commercial and other standpoints. In speaking of the market which it opens for Southern products, General Wood said:

"Every pound of rice consumed in Cuba and every yard of cotton goods should be purchased from the United States. This means that the Southern people should furnish all of the rice and most of the cotton. Yet the great bulk of clothing for the negro and laboring classes is bought abroad, and rice as well. Right here is a trade aggregating $10,000,000 annually at a conservative estimate, a sum equal to the annual value of the Southern rice crops, which should go to the Southern producers. It should offer an incentive to rice-growing in the South, as undoubtedly these States possess facilities for producing the cereal at prices which would monopolize the Cuban market. The revenue from it would do much to compensate possible loss from Cuban competition in sugar-cane, for example. It is undoubtedly true that rice and other food crops can be grown abundantly upon the island and make the people self-sustaining in this respect, but the soil is too well adapted for special crops. It is really money wasted to raise rice, corn, and even vegetables, as tobacco and sugar-cane can be grown equalled in quality nowhere in the world.

"The island must also depend largely upon the United States, and should depend on the Southern States, being nearest to it, for fuel. As yet but a beginning has been made in the coal trade. The sugar refineries and other industries have burned English fuel carried across the Atlantic, although a few shipments have been received of Southern fuel. The prices of coal have been so high that as yet the refineries extensively use bagasse, which is not satisfactory in the modern methods of sugar-making. The timber is too valuable to be used for firewood. With soft coal selling as high as $8 per ton, almost an unlimited opportunity is offered to place a large tonnage not only at Havana, but at various other seaports. It should be remembered that all of the important harbors are of sufficient depth to allow the entrance of vessels of considerable size. I should say the average ship channel has a depth of at least fifteen feet of water, and in some instances more. This allows the storing of coal, which can be transported to the most convenient seaport to the center of consumption, and not merely to Havana, to be transferred by rail at an extra expense."

When asked as to the possibilities of oil as fuel for industries on the island, General Wood said: "If fuel oil such as is being secured in Texas can be transported to Cuba in quantities to sell it at a sufficiently low price, it could be substituted for bagasse, and thus solve a very serious problem which sugar refiners have to encounter. The extraction of the juice of the cane by the modern diffusion process could be employed, but at present the benefit of this method is practically lost. The refiners relying principally upon bagasse cannot take advantage of it, except in a few instances—simply because they cannot afford to purchase any other fuel.

"I have mentioned rice, cotton goods, lumber and fuel as products which the South should furnish the Cuban people. I might also add machinery for sugar refineries, railroad material, building material, electrical apparatus, as other needs which must be filled from abroad, if not from the United States, and I believe all of these are made in the South to more or less extent. It has, geographically, advantages over other portions of the country for commerce with the island, and lines of vessels can be operated directly between the South Atlantic and Gulf cities, and not only Havana, but other seaports, as it has a number of fine harbors, to which I have already alluded. The people at present are very favorable to commercial intercourse with Americans, although purchasing largely from foreign countries. It should be remembered that in spite of what it has passed through, and of the uncertainty of future conditions, Cuba is increasing rapidly in population, and it is not too much to predict that in twenty years it will contain fully 15,000,000 people. Immigration from Spain has been resumed, and it is not uncommon for a thousand settlers from the Kingdom to arrive at Havana in a week. They are of a desirable class, many coming from the mountain district, healthy, vigorous and experienced in agriculture. They are very desirable, for Cuba needs more agriculturists, and its natural resources possess excellent opportunities. I may add that a good opening is afforded machinists, electrical experts and others technically trained. In the tobacco industry the methods admit of but little improvement, but there is much to learn in the manufacture of sugar, and undoubtedly it can be considerably improved by American ideas. Southern sugar planters and refiners could enter this field with much profit to themselves and to the island.

"The people of the South should look at the Cuban situation in this light. They cannot possibly expect to compete with the island in the cultivation of sugar or tobacco. Why not supply such articles as rice and clothing to Cubans, thus increasing their production of food and cotton, which they can raise to such an advantage? Is it not to the interest of the Southern States to retain the friendship and good-will of a country which in twenty years will have, as I have already stated, fully 15,000,000 population to be fed and clothed? It is only just to give the Cubans a fair opportunity to sell their products. This country liberated them, and they naturally look to the United States for a market, and are only too willing to reciprocate by buying from the States. By taking such measures as will prevent them from selling their staples at a profitable margin we will cause financial ruin to the people. Ten years of warfare have heavily mortgaged the largest plantations, but the harvests would soon free the owners from debt and place them in an independent position if they are given a just opportunity to enter the American market. Prohibitive measures will change the feeling upon the island from optimism to discouragement, and a few years might see Cuba in a similar condition to Hayti—a lamentable illustration of the wreck of a country. At present there is every possibility of Cubans establishing an able government, qualified to carry out measures for improvement which will raise instead of lower their standard as a people. But they look to the United States for aid and protection. When we freed them, by that act we became responsible in a great measure in the eyes of the world for their future welfare.

"Another fact which vitally concerns the South is whether Cuba in future is to be a constant menace from a hygienic standpoint, or whether the elimination of epidemics is to be permanent. The removal of quarantine against Southern communities caused by the steps taken by the government to eradicate yellow fever in Cuba has been worth as much to the South as all of the expense incurred by the United States since it took an interest in Cuban affairs. Unless we place the people in such a position as to continue in

force the present sanitary system, the island may again become a plague spot from which disease will yearly enter the South. If the country becomes bankrupt, it will naturally retrograde in sanitary as well as other conditions."

NEGRO MIGRATION AND INDUSTRY.

By Edward Ingle.

[Written for the Manufacturers' Record.]

Analysis of the statistics of males and females in the four leading groups of the population of the United States brings out a fact about the negroes which, if studied in many of its bearings, may counteract feelings of disappointment or discouragement about that race, based upon a hasty glance at the figures marking its movements during the past ten years. That study, it is believed, will go far toward revealing the character of the negro as a worker, and his special value as such to the South. This is already recognized by thinking men, but calculations tending to confirm it statistically, as far as figures prove anything, may be of more than superficial interest.

Disregarding the Chinese and the Japanese, constituting a comparatively small element in the population, the only group in the country in which females are in excess is that of the negro. Males are 54.11 per cent. of the foreign-born whites, 50.77 per cent. of the native whites, 50.45 per cent. of the Indians, and but 49.70 of the negroes. The males are in excess by 865,637 in the total of 56,740,739 of native whites, by 841,603 in a total of 10,250,063 of foreign whites, and by 2360 in a total of 266,760 Indians. The females are in excess by 54,347 in a total of 8,840,789 negroes. Foreign white females exceed the males in Massachusetts and Rhode Island only, their excess there being 34,742, the males elsewhere exceeding them by 876,345, the excess in the South being 65,926. The native white females are in excess of the males in New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, District of Columbia and North Carolina.

In the States outside the South, by which is meant the region extending from Mason and Dixon's line, the Ohio river and the southern boundary of Missouri to the Gulf of Mexico and the Rio Grande, there are but six, and they New Hampshire, Massachusetts, Rhode Island, Connecticut, New York and New Jersey, in which there is an excess of female negroes, the total being 10,394, while the excess of males outside the South, excluding those stationed abroad, is 13,641. The relative numerical strength of male and female negroes in the South is shown by the following table:

States.	Excess of females.	Excess of males.
Alabama	8,833	.....
Arkansas	.....	3,828
District of Columbia	10,006	.....
Florida	.....	9,668
Georgia	15,075	.....
Kentucky	560	.....
Louisiana	5,476	.....
Maryland	3,830	.....
Mississippi	862	.....
North Carolina	17,221	.....
South Carolina	15,069	.....
Tennessee	3,467	.....
Texas	452	.....
Virginia	13,804	.....
West Virginia	.....	6,835
Total	94,655	20,331

Thus it will be seen that in the South the female negroes are in excess of the males in every State except Florida, Arkansas and West Virginia, but their excesses, in Kentucky 560, in Mississippi 862 and in Texas 452, are so slight as to be almost as significant as the excesses of males in the other three Southern States mentioned.

The percentage of females in the negro population of the United States is 50.30. This is exceeded only in the District of Columbia, where it is 55.77, New York 53.02, Rhode Island 52.81, Connecticut 52.40, New Jersey 51.68, North Carolina 51.37, Massachusetts 51.23, Virginia 51.04, South Carolina 50.96, Maryland 50.81, Georgia 50.73, New Hampshire 50.60, Alabama 50.53, Louisiana 50.42 and Tennessee 50.36.

This percentage for the country is greater than that in five States and one Territory, in which the percentage of female negroes is greater than the percentage of native white females, viz., Kentucky, where the female negro percentage is 50.09, Mississippi 50.03, Texas 50.03, Missouri 49.63, Oklahoma 49.50 and Arkansas 49.47. It is greater than that in twelve States and one Territory, where the percentage of female negroes is below that of native white females, viz., Maine 49.20, Delaware 49.12, Pennsylvania 49.04, Kansas 48.96, Ohio 48.41, Indiana 48.35, Michigan 48.02, Florida 47.90, California 47.79, Colorado 47.69, Illinois 46.96, Nebraska 46.27 and Indian Territory 48.04. It is far greater than that in fourteen States and four Territories, in which the percentage of female negroes is below that of foreign white females, viz., Vermont 45.03, Wisconsin 44.21, Iowa 44.10, Idaho 43.34, Minnesota 42.81, West Virginia 42.14, South Dakota 41.50, Montana 40.11, North Dakota 39.51, Nevada 38.80, Oregon 38.73, Washington 36.79, New Mexico 36.45, Wyoming 32.87, Utah 32.44, Hawaii 32.18, Arizona 26.24 and Alaska 10.11.

When it is remembered that the percentage of increase of the negro race in the country was exceeded by the percentage of increase of that race in but twenty-one States and three Territories, only seven of these being in the South, these percentages by States showing the relative proportions of males and females point not only to a wonderful diffusion of that race through the country, but also to an increasing restlessness and tendency to migration, not without erratic manifestations, as in a decrease in the number of the race in ten years of 277 in California, 2644 in Nebraska, 108 in Nevada, 87 in North Dakota, 81 in Oregon, 76 in South Dakota, 111 in Vermont and 346 in New Mexico, and the small percentage, much below the birth rate, of 8.14 in Delaware, 4.61 in Kansas, 6.20 in Kentucky, 8.99 in Maryland, 3.89 in Michigan, 7.36 in Missouri, 2.21 in Montana, 7.81 in New Hampshire, 3.97 in Virginia, 4 in Wisconsin and 1.08 in Wyoming.

As a matter of fact, in the territory belonging to the United States in 1900 there were 2867 counties, parishes, districts, separate municipalities and Indian reservations regarded as general divisions in census enumeration, and in only 169 of these divisions and eight of these Indian reservations were there no negroes. They were lacking in 1 of 14 divisions of Arizona, 7 of 57 of Colorado, 3 of 21 in Idaho, 1 of 102 in Illinois, 6 of 12 in Indian Territory, 4 of 99 in Iowa, 10 of 105 in Kansas, 2 of 83 in Michigan, 11 of 83 in Minnesota, 2 of 115 in Missouri, 19 of 90 in Nebraska, 3 of 14 in Nevada, 10 of 41 in North Dakota, 1 of 88 in Ohio, 1 of 27 in Oklahoma, 3 of 33 in Oregon, 23 of 66 in South Dakota, 36 of 243 in Texas, 12 of 27 in Utah, 1 of 118 in Virginia, 6 of 36 in Washington and 6 of 70 in Wisconsin. Negroes were found in Hawaii, and even in Alaska. They are on the move. In a comparatively small group of States the males and females are moving at the same rate and about in the same direction. Elsewhere they are following separate lines.

The tendency of the females in the movement in the South and as they have moved from it has been for the most part toward towns and cities. This is a result in large measure of the openings in urban life to household service or its accessories, especially in the South. For instance, males are in excess to a total in the State of 9668 in all but nine of the forty-five counties of Florida. The attraction of the cities for females appears in their excess of females by 1148 at Jacksonville, the whole of Duval county having an excess of but 479; by their excess of 424 at Key West, Monroe county having an excess of but 322, and by their excess of 263 at Tallahassee, Leon county having an excess of 851. In Texas, where there are no negroes in thirty-six counties, where males and females are equal in number in ten counties, and where in 107 of the remaining 197 counties the males predominate, though the females are in excess 452 in the whole State, and are in excess at Galveston by 865, Dallas 679, Austin 534, Waco 456, Houston 426, Marshall 415, San Antonio 378 and Tyler 331. Their excesses in the counties in which these cities, respectively, lie are in Galveston county 824, Dallas 412, Travis 353, McLennan 341, Harris 218, Harrison 491, Bexar 376 and Smith 435. Though females predominate at Beaumont and Corsicana, the males are in excess in Jefferson and Navarro counties, in which they respectively lie.

Manifestations in Florida and Texas, toward which the most active negro drift in the lower South has largely tended, are duplicated in the longer settled States, such as Tennessee, where Chattanooga has 300 of the 306 excess of females in Hamilton county, and where Memphis' excess is 808 in Shelby county, which has a total excess of only 339; Nashville's excess is 3506 in Davidson county, with its excess of 2902, and Knoxville's excess is 703 in Knox county, with its total excess of 631.

So in Virginia, Norfolk City has 1246 more females than males, while Norfolk county, not including the city, has an excess of 478 males. The males predominate in but three Virginia cities—Newport News by 1046, Pocahontas by 213 and Covington by 166. The excess of females in Norfolk by 1246, in Richmond by 3522, Lynchburg 1696, Petersburg 1343, Danville 1125, Roanoke 656, Charlottesville 533 and Alexandria 419, in a State where the females are in excess by 13,804, is a condition fairly typical of that in others of the older Southern States. But consideration of the facts that the increase in the negro population of Virginia in ten years was less than 4 per cent.; that the percentage of increase was greater for the males than for the females, and that of the forty-six counties in which males predominate, twenty-eight are practically contiguous in the Tidewater section, within easy access to steamboat and railroad connection with points beyond the Potomac, a flood of light is thrown upon rather remarkable developments in New York, New Jersey, Pennsylvania and Delaware. These twenty-eight counties are Northampton, Accomac on the Eastern Shore, Princess Anne, Norfolk, Nansemond, Southampton, Amelia, Dinwiddie, Prince George, Surry, Isle of Wight, Chesterfield, Charles City, James City, Warwick, York, New Kent, Gloucester, Mathews, Middlesex, Essex, Lancaster, Richmond, Northumberland, King George, Westmoreland, Stafford and Prince William.

In Maryland, where the males increased at a greater rate than that of the race increase, 8.99, the total excess of females in the State, 3830, is accounted for by the excess of 9132 in Baltimore city alone. In eighteen of the twenty-three counties of the State the males are in excess. They predominate, too, in the three counties of Delaware to a total of 535, though there is an excess of 388 females in Wilmington, and small excesses of them in Dover and Milford.

The migration of the females, most marked, probably, in Virginia, noted in States farther south and registered partly in the excess of 9132 in Baltimore city and of 10,006 in the District of Columbia, has been even more rapid, apparently, in Maryland and Delaware, the latter State now having fewer negroes than Massachusetts; in Kentucky, where the females are but 560 in the majority, in spite of their excess of 1455 at Louisville, and where males predominate in 73 of the 119 counties, and in Missouri, where the males predominate by 1178 in 52 of the 113 counties, with the females in excess by 524 in St. Louis, and where the negro population is but 4389 greater than that of Pennsylvania.

North Carolina and Tennessee form what, for lack of a better term, may be called the great negroshed of the country. On one side the negro race is moving away the more rapidly as it approaches the north; on the other the movement is slower, but yet equally well defined. The progress of this migration on the seaboard has probably been from the neighborhood of Raleigh and Wilmington, with ever-increasing volume, through Danville, Lynchburg and Washington by one route, and by another through Norfolk, Petersburg and Richmond, the two streams meeting at Baltimore for the final move farther north. This is to be traced in the 2354 excess of females in New Jersey, where the total of their race has increased by 22,206, or 46.61 per cent., in ten years, and where they are most prominent in Camden, Essex and Union counties, adjacent to Philadelphia, Jersey City and New York; in their 4733 excess in Philadelphia and 111 in the adjoining Montgomery county in a State where a decade's increase of the race by 49,249, or 45.77 per cent., has left the males predominating in 50 of the 67 counties, and in their excess of 5996 in New York State, where their greatest local excesses are 2113 in Kings, 3816 in New York and 714 in Westchester counties.

Connecticut, Massachusetts and Rhode Island have felt the effects of this migration, though they have been touched by the back-water rather than by the tide, and their female negroes are to be found as heads of families or in independent position rather than as servants. In those States, perhaps, is the greatest demarkation between the successful settled negroes and their migrant brethren, a demarkation which weakens as the springs of the movement in the South are approached.

In many instances, as everyday occurrences prove, the trail of the migrant females has been closely followed by not a few males, a curse to any community North, South, East or West, where they are permitted to live, each one of whom requires the bulk of the wages of from three to five servant girls to keep him in vicious or criminal ease, whether he be a pseudo-preacher, a pretentious politician or a plain, unvarnished parasite.

But the males who have migrated from the South, in spite of the discouragements in other sections for them in industry, are by no means all of that grade, especially the class who have found lodgment behind the Alleghanies. They are as industrious and as ambitious as many of the females. The brickyards of

Haverstraw and the many industries of Nyack must account, in part, certainly, for an excess of negro males of 741 in Rockland county, on the west side of the Hudson, just above New York city, but far enough away from Hell's Kitchen—legitimate employment at the Jersey coast resorts—for their predominance by 102 in Atlantic county, New Jersey, and for their 448 majority in Gloucester and 267 in Salem counties, in the same State. Then, too, the difference between an excess of 329 females in Hamilton county, 170 of them being accounted for by Cincinnati, with the excess of males of 366 at Cleveland, 421 at Columbus and 49 at Dayton, in Ohio, in which State the males predominate in 70 of the 88 counties to a total of 3069, is typical of conditions, with slight contradictions, in Chicago with an excess of 1996 males, Boston with an excess of 217 and San Francisco with an excess of 90, where opportunities for living without muscular exertion may have some weight, which are strikingly revealed in Pennsylvania, with its sharp contrast between the excess of females in the eastern county, Philadelphia, and the excess of 3495 males in Allegheny, 708 in Fayette, 424 in Washington, and of smaller numbers in the group of other counties of the Pittsburg region. The mass of these males of suitable age may safely be regarded as workers drawn to the region where work for which they are peculiarly fitted may be had.

This assertion must be modified when applied to the negroes in the South, though even there the relation between opportunities for work and negro migration is strikingly manifest in many cases. Study of them may be approached from the starting-point of the location of the excesses of male negroes, as shown in the following table, it being remembered that the highlands have seldom appealed to the negroes, and that in some parts a negro is as much a stranger as he would be in British Columbia:

States.	No. of census divisions.	No. in which males are in excess.
Alabama	66	26
Arkansas	75	49
District of Columbia	1	..
Florida	45	36
Georgia	137	66
Kentucky	119	73
Louisiana	59	32
Maryland	24	18
Mississippi	75	32
North Carolina	97	19
South Carolina	40	8
Tennessee	96	50
Texas	243	107
Virginia	118	47
West Virginia	55	43
Total	1250	606

Of these fourteen Southern States, but special attention in this direction need be given only seven. Maryland, Virginia, Kentucky, Tennessee, North Carolina and South Carolina have negro populations far below what should be expected of the normal increase by births, and also in the case of the first three, of an increase in the shape of laggards in the migratory movement. Georgia, with an increase of 20.51 per cent. in ten years, with excesses of females of 6122 at Atlanta, 2598 at Savannah and 2247 at Augusta, accounting for about two-thirds of their excess in the State, and with males in excess in 66 of its 137 counties, and with negroes possessed of more than $15,000,000 worth of assessable property, presents that population in more stable equilibrium, perhaps, and more satisfactory condition than anywhere else in the South, for there is a fair triangular balance of the race in agricultural pursuits, personal service and developmental industry. Of the remaining seven States, Louisiana is losing its negroes, the whites, with an increase of 171,217 in the decade, having more than overcome a majority of 798 negroes in 1890, and the negroes showing about the same rate of increase, a little more than 16 per cent. for both males and females. This fact, with the presence of a majority of males in 32 of the 59 parishes of Louisiana, may have a bearing upon the difference of 4 per cent. in favor of females in the increase of negroes in Arkansas, where the greatest instability seems to be revealed, and upon a slighter difference in Mississippi.

In the last two States named and in Alabama and Texas, where the total increase is above the normal, and where the rate of increase is 1 per cent. greater for females than for males, the migration, it must be remembered, has been toward occupation in the cotton fields, in which females share, as well as toward industrial employment.

Even in Alabama, with its excess of 8833 females in a total of 827,307, the instinct of the males to move to industrial centers is marked. The males are in excess in only 26 of the 66 counties in the State. Their greatest excess is in Jefferson county and in the group of counties adjacent to it—Bibb, Blount, Cherokee, Chilton, Clay, Etowah, St. Clair, Shelby, Talladega and Tuscaloosa. An excess of females of 1099 at Birmingham is not surprising, though Jefferson county has an excess of 4465 males, who are in excess in such places as Avondale, Bessemer, Dothan, Gadsden, Pratt City and Sheffield. In that group of Alabama counties are centered the coal-mining, the iron-mining and the leading manufacturing undertakings of the State. In another group in the southeastern section—Coffee, Covington, Dale, Escambia, Henry, Pike and Geneva counties—is centered the lumber industry, and there, too, has been considerable railroad construction. In that section the males predominate, leading in Covington, with an excess of 442.

Railroad building, lumbering, phosphate working and the expansion of diversified agriculture have attracted the negroes to Florida. This is particularly true as to the males, who, with a total excess of 9668 in the State, predominate in 36 of the 45 counties, mostly in Alachua, Marion, Polk and Hamilton counties, with excesses of 1389, 935, 754 and 742, respectively. The counter-attractions of town life and town occupations, already noted, at Key West, Jacksonville and Tallahassee is manifest also in such counties as Hillsboro, with a male excess of 267, but with females in 82 majority at Tampa; as Nassau with 314 male excess, with but 86 excess at Fernandina, and as Escambia with 145 female excess, but with 403 more females than males at Pensacola.

Agriculture, to which the negroes of both sexes have been accustomed, explains to some degree the large percentages of negro increase—in Mississippi 22, in Texas 27 and in Alabama 21—especially as the rate of increase for the females in those States is above that for the males. But the influence of industrial enterprises, reducing the difference between the sexes in these States to so small a margin, while perhaps indicating a certain amount of settling toward conditions similar to those of the native white race, is clearly seen in Florida, where the males outnumber the females by nearly 10,000 in a total of 230,730.

It is even more clear in the case of West Virginia, where, constituting but 4.5 per cent. of the total population, the negro in agriculture is an inconsequential element in most of the State. In all but 12 of its 55 counties the males are in excess by 6835 in a total of 43,499. The increase of the negro population in ten years was 33.06 per cent. But the males increased 40 per cent., or 3 per cent. less than the increase of that sex in Florida, and the females 24 per cent., or 10 per cent. less than the rate for them in Florida. Females do not seem to have secured the lodgment in West Virginia towns as they have done in towns of Tidewater Maryland and Tidewater Virginia. Of the sixteen West Virginia towns and cities noted separately in the census, one, Benwood, has no negroes, and none has as many as 2000 of them in its population. In the ten in which the females are in excess, their majorities are as small as 169 at Charleston, 57 at Hinton, 53 at Parkersburg, 52 at Martinsburg, 38 at Bluefield, 28 at Wheeling and 16 at Wellsburg, while the town male majorities are 338 at Moundsville, 59 at Fairmont, 46 at Clarksburg, 15 at Sistersville and 5 at Weston. In the several counties the balance between the races is pretty even. There are, however, notable exceptions of excesses of males of 2205 in McDowell, 1525 in Fayette, 466 in Mercer, 348 in Harrison, 339 in Marshall, 361 in Wetzell, 303 in Pocahontas, 245 in Randolph, 196 in Raleigh and 126 in Marion. Beneath the surface of those counties are the vast resources of coal, iron, natural gas and other minerals, which are giving employment to thousands of men as miners and rough laborers, and which are assembling so many new industries, and they are covered with the magnificent timber growth of the State.

Lumbering is partly restraining the drift of negroes from Louisiana, though railroad construction has not been without great weight, and sugar plantations still hold them, in spite of the influx of Italians. The total excess of 5476 females in the State is centered about Orleans, in which parish they outnumber the males by 7456. But the largest excesses of males are in St. Mary 482, East Baton Rouge 436, St. Charles 352, Lafourche 320, Acadia 280, Terrebonne 204, where sugar, rice and cotton are grown, with here and there lumbering operations under way.

Though there are few large towns in Mississippi, they reveal the female instinct as clearly as do the towns in other States. Hinds county has an excess of 721 of them, Jackson City 445; Adams county an excess of 1300, Natchez 1086; Warren county an excess of 1058, Vicksburg 1111, while in Yazoo county, with an excess of 284 males, Yazoo City has a female majority of 132. Yazoo county has an abundance of oak, cypress and red gum, and there are rich long-leaf pine resources in such southern counties as Jackson, with 471 males in excess, and in Perry, Pearl River, Greene, Harrison and Marion, though the excesses in Harrison, Perry and Covington must be partly due to the construction of the Gulf & Ship Island Railroad on its way toward Jackson. The bulk of the male excesses, however, are found in such counties as Bolivar 1209, Coahoma 1205, Tunica 922, Washington 883, Issaquena 451, De Soto 277, containing the low line cotton lands between Vicksburg and the northern boundary of the State; Sunflower 908, Leflore 793, Sharkey 395, Quitman 307 and Tallahatchie 283, lying in the heart of the rich Yazoo delta, with its cotton lands and its hardwood timbers.

Levee work, upon which the male negroes are employed in large numbers in the Mississippi counties above Vicksburg, must also be done on the opposite side of the Mississippi in Arkansas. It is to be expected, therefore, to find in that State, where the males predominate by 3828, the larger excesses of 711 in Mississippi, 593 in Lee, 540 in Crittendon, 493 in Desha, 453 in Phillips, 267 in St. Francis and 256 in Chicot. That the coal-mining in the western part of the State around Fort Smith has not yet brought the males to an excess there is not surprising, in view of the great railroad development of the past three or four years which Arkansas has shared with Louisiana and Texas, and of the lumbering undertakings in the southeastern portion of the State; beside, Arkansas has contributed with Texas and Louisiana to the increase of negroes by 97.75 per cent. in Indian Territory and by 533.40 per cent. in Oklahoma during the past decade; in fact, Arkansas may be regarded as a sort of half-way station on the route of the negro migration toward the Southwest.

The rate at which they have advanced into Oklahoma is even greater than the rate of the white advance. That their males there are 287 in excess of the females in a total of 18,831, paralleling the excess of white males, leads to the conclusion that at least one portion of the negro race possesses qualities similar to those of the white rate, which, as a rule, place the males in a majority in a migratory movement for the betterment of social conditions. It was the case a half a century and more ago with pioneers of American stock, it is the case today with the white immigrants from Europe, and it is the case with the mass of negroes moving northwest or southwest beyond the Alleghanies and toward such industrial centers as Warwick county, Virginia; McDowell county, West Virginia; Jefferson county, Alabama; Maury county, Tennessee, and Jefferson county, Texas. The great contradiction is in the movement of female negroes toward the Eastern seaboard, though that is a logical result of their general townward inclination, and akin to the influx of foreign white females, when the demand began years ago for domestics in such cities as New York and Philadelphia.

In the South the exodus of females to Eastern cities is a source of irritation, compensated for, however, by the knowledge that the inadequate training of these females, and the presence about them in the cities where public sentiment in the North is created, of the greater number of worthless males who leave the South, for the good of the South, will undoubtedly bring the main issues of the race problem close home to those persons who have attempted in remote misunderstanding to solve it theoretically, and will induce them to help the South to handle it practically. Its solution in the South is being hastened by the strongly-marked determination of male negroes to do the work, the heavy work of lumbering, mining and railroad construction, which they have done in States that are well on the way to full development, and which they are doing in States which, during the past ten years, have gotten in step with the country's industrial progress. The race is in a flux at present, shifting from industrial occupations to agriculture, or the reverse, but with the sloughing of the undesirable and the worthless to quarters beyond the South the industrious negro will, if permitted to be guided aright, ultimately find himself, to his own benefit, and to the benefit of the whole country.

Arkansas Granite.

Articles of incorporation of the Twen-Cen Granite Works have been filed at Little Rock, Ark. The capital stock is $300,000, of which $100,400 has been subscribed. The document names Albert H. Lea of Knoxville, Tenn., as president; R. H. Samson, vice-president; W. D. Braddock, secretary; Robert E. Waite, treasurer, and John R. Fordyce as the other director. Mr. Fordyce is the son of Col. S. W. Fordyce of St. Louis, president of the Little Rock & Hot Springs Western Railroad Co. It is understood in business circles that this organization is simply a skeleton, and later will give way to the formation of an organization consisting of New England capitalists.

SUBSTANTIAL POETRY.

Impressions of a First Visit to Spindle Top.

[Written for Manufacturers' Record.]

For persons who have never seen Spindle Top gushers, the eighth wonder of the world, pen and ink and paper are utterly inadequate to convey a faint idea of the greatest oil field ever discovered. The impression of a first visit to the gushers, now numbering 105, with an estimated daily capacity of 5,000,000 barrels, can never fade from the mind. The array of derricks is in itself awe-inspiring. They stand massed as a great army, with here and there a lone sentinel silently guarding this field of almost inestimable wealth, husbanding a power that, given to the world in all its freedom, will revolutionize industry far and near.

The spectacle is an inspiration to business reflection, an incentive to deal in futures and to attempt to calculate the infinite possibilities only partly revealed. It is an inspiration to the poet, for what measure can be sweeter than that marked out in the whirr and hum of machinery under the influence of the immense force here pent up—the measure that feeds and clothes and shelters man? This substantial and practical music is to be heard throughout the world in fields now dormant because of lack of cheap fuel, and its motive will be the oil of Spindle Top seeking its way to the surface from great subterranean reservoirs.

Texas oil is the Good Samaritan, industrially, of the twentieth century. It will be of lasting value to the great empire of Texas, a vast territory which has only been waiting cheap fuel to develop its great stores of material for manufacturing. The closeness of the oil deposits to deep water forbids a limitation of their benefits to Texas, for it gives them easy access to wider markets, an advantage possessed by no other oil field in the world. It was my good fortune to be invited, through Mr. J. D. Bright, its efficient sales agent, to accompany the directors and officers of the German-American Oil Co. on their trip of inspection of the company's three gushers in the heart of the Spindle Top region. Three of the wells were baled and turned on for the benefit of the party. No. 1 is an eight-inch well, one of the largest in the region, and therefore in the world. I had already seen one turned on. It went spouting more than 200 feet in the air in black, ominous-looking, roaring volumes. The black gradually faded away to a steel gray. When the wells of the German-American Company were turned on, from them the liquid gushed with a force seemingly mighty enough to shatter a Gibraltar.

About half a mile from the wells the company has prepared an earthen tank—a hole in the ground—for storage purposes, with a capacity of 110,000 barrels, and another with the same capacity will soon be ready. The trackage of the company is 100 or more yards distant, affording excellent facilities for handling the product. To get the oil to market is the problem now to be solved in the Beaumont region. It is safe to say that no other single industrial or commercial puzzle so gigantic has ever been presented to the energy and ingenuity of American business men.

V. H. POWER.

The Beaumont Oil Field.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, December 7.

It was the expectation a couple of months back that the development of wells on the Hill would gradually decline, but this does not seem to be the case, as there are more wells in prospect than have already come in, and within six months it would not be amiss to state that there will be nearly 250 wells on this Hill. There is some effort being made by some of the oil companies to find oil off the Hill. Three "deep" wells, as they are called, are being drilled, one by the Treadway Oil Co., one by the Federal Crude Oil Co. and another by the Aline Oil Co. The Treadway is 1700 feet deep, with a 10-inch pipe, where they are temporarily stopped on account of some small accident, but they will go deeper with the eight-inch pipe if they find the 10-inch cannot be sent any further down. The Aline Oil Co.'s well is close by, but is not so far down, while the Federal Crude is down 2150 feet. This is the deepest well either on or off the Hill. It is about 1600 feet due south of the Hill. The other two deep wells are about a mile off the Hill in the Iowa Colony, in a northeasterly direction. It would be of inestimable value to Beaumont and the future of the oil field if a good oil strike could be made off the Hill. While at the present time there is more oil available than can possibly be sold or shipped, yet there is a fear on the part of some of the larger prospective consumers that it might play out. Shipments are being made as fast as the cars can be secured. The car situation is getting better, however, but slowly.

OIL FOR WORLD'S FAIR FUEL.

Mammoth Power Plant at St. Louis May Use the Texas Product.

Fuel oil from the wells of Texas will probably be used under the boilers of the big power plant of the Louisiana Purchase Exposition, to be held in St. Louis in 1903. The director of works of the exposition is looking into the feasibility of using Texas oil instead of the soft coal which supplies very nearly all the fuel for the big factories of St. Louis. If the expense of the fuel oil, either in first cost or in cost of transportation, is not prohibitive, it will be used.

"Oil has vast advantages over soft coal as a fuel," says Director of Works Taylor. "Its principal advantage for exposition uses, where cream white is the color of the buildings, is that it does away with the all-soiling sooty smoke which bituminous coal produces. It also eliminates the dust produced in handling soft coal and the ash from it.

"Oil can be transported into the grounds in a pipe line. This obviates the necessity for a railway switch into the grounds for handling ashes and coal. It does away with firemen, coal-passers and ash-handlers. It obviates the necessity of banking fires during the time when they are not in maximum demand. The oil-jet fire can be extinguished and raised to its maximum in an incredibly short time.

"I have received propositions from several large handlers of Texas oil looking to the use of that fuel. If we can make suitable arrangements for transporting the oil, the World's Fair at St. Louis in 1903 will be operated with Texas oil."

The power plant for the Louisiana Purchase Exposition is to be the largest on earth, with a capacity of upwards of 30,000 horse-power. Electrical contractors from all parts of the United States are now in St. Louis gathering information regarding the plant. The big engines are to be located in the center of the machinery building as an exhibit, while the battery of boilers will be located where danger of fire to the exhibit buildings will be eliminated.

More Tank Steamships.

A New York dispatch is to the effect that Sir Christopher Furness, who, it is reported, has decided to construct a large shipyard in this country, has also secured a contract to build a fleet of six tank steamships for carrying oil. The vessels are to be constructed at the Furness yards in Great Britain, and it is reported will carry oil from the Texas fields to European ports, being scheduled from Galveston and New Orleans. Each vessel will have a capacity for 8000 tons, and will also burn oil as fuel. The contract, it is stated, provides for the completion of the vessels as soon as possible.

OIL NOTES.

Facts About Petroleum and Its Uses.

Tests of Beaumont oil for fuel are in progress at an ice plant in New York city, the tests so far having shown that the oil has done everything that is claimed for it.

The Southern Pacific Railway Co. has recently decided to equip its large ferry-boat Solano with oil-burning apparatus and tanks which will have a capacity for 6000 gallons. The Solano plies between Port Costa and Benicia, Cal.

It is announced that the sugar planters of Southwest Louisiana have agreed that crude Beaumont oil is the cheapest fuel for their mills, and have decided to organize a company to buy one of the smaller gushers and to establish a line direct from the oil wells to the sugar plantations.

Two vessels, said to be the first of their kind capable of using either oil or coal as fuel, will soon be ready for launching at Camden, N. J. Each vessel is 371 feet long, 46 feet beam and 34 feet depth, and will have a registered tonnage of about 4500. They will be in the service of the American-Hawaii Steamship Co.

A St. Louis dispatch says that the line of steamships proposed between Sabine Pass and Philadelphia to carry oil in bulk is backed by the Laclede Investment Co. of St. Louis, represented by Bruce K. Oyler. A vessel has recently been converted into a tank steamship on the Great Lakes, which will be placed in this service.

In connection with the announcement that the Edison Illuminating Co. of Savannah, Ga., has secured control of the various street railroads in that city, a statement is made that several lines now operated by animal power will be rebuilt for the use of electric motors. The president of the Edison Company is Mr. George J. Baldwin, who is also interested in the railroad system at Houston, Texas. It is stated that securities to the extent of about $3,500,000 will be issued covering the Savannah lines, and an interesting report in connection with the transaction is that oil will be used as fuel in the power-house, being transported from the Texas field.

West Virginia Notes.

[Special Cor. Manufacturers' Record.]
Wheeling, W. Va., December 10.

The survey for the Jarvisville Railroad has been completed by Chief Engineer J. Horner Davis. This road will extend from Jarvisville, near Clarksburg, to Big Isaac; thence to Avon, in Doddridge county, to St. Clair; thence to Troy, Gilmer county; thence to Alice and to the Little Kanawha river at Leading Creek. The road will be sixty-six and one-quarter miles long, and will tap the various coal districts that have been blocked out recently by independent concerns operating outside of the new coal consolidations in West Virginia. Common report has it that J. Pierpont Morgan's syndicate is interested in the development of these properties.

The Riverside works of the National Tube Co. at Benwood are to be improved by the construction of a new threading floor in the new tube department. This extension of the plans means the installation of a large number of new machines and the employment of 150 more men.

An important change has been made in the manner of shipping coal from the Clarksburg and Fairmont fields, the Baltimore & Ohio having diverted its coal traffic over the Short Line Railroad, giving it a straight shoot to the Ohio river at New Martinsville. Some of the smallest engines of the Baltimore & Ohio last Saturday, the first day of the change, went over the Short Line hauling thirty-five cars of coal with ease.

INDUSTRIES AT NEW ORLEANS.

First Important Installation of an Oil-Burning Plant.

[Special Cor. Manufacturers' Record.]
New Orleans, La., December 4.

This city may date a new industrial era from today, for today witnesses the first important installation here of machinery for burning crude petroleum for the production of steam. The installation was made in the large plant of the Jackson Brewing Co. It consists of storage tanks with most approved ventilation appliances, duplicate feed pumps and steam-spraying apparatus. The installation was made under the supervision of C. O. Billow, C.E., M.E., of Chicago, who has conducted preliminary tests of the fuel, and furnishes your correspondent with the approximate results obtained, which, he says, will be very close to the figures of actual practice.

He evaporated 1700 gallons of water with 100 pounds of oil, the water being fed to the boilers at the normal temperature. He says that this shows the oil to be equal in heat units to slightly more than twice its weight of Pittsburg bituminous coal, or something less than four barrels of oil does the work of a ton of coal under practical economical conditions.

A large number of the leading industries of this city are arranging for the installation of oil-burning plants.

There has never been a time in the history of this city when so many new enterprises were under consideration by local manufacturers and so many prospectors here from abroad engaged in examining or exploiting the advantages to be gained by locating here.

Messrs. Gonzales & Mora of Ybor City, Tampa, Fla., have recently established a Havana cigar factory here, and as soon as the enlargement of their floor space now going forward is completed they will employ 200 cigarmakers. They have not abandoned their Tampa factory, but it is their intention to make this their principal place of business. No less than four other large manufacturers of Havana cigars from Tampa and Key West, Fla., have been here within the last ten days looking into the advantages of this location, and all have expressed themselves as greatly pleased. They say that the climate here is suited admirably to handling the most delicate grades of fine tobacco, and they are all of the opinion that labor troubles, so common in the Cuban and Florida factories, would be much less frequent here, owing to the very different social conditions that would surround the employes.

A chair factory has been established here by local capital. It was in the nature of an experiment, and was started on a small scale, as the gentlemen at the head of the enterprise were not assured as to results, nothing of the kind having been attempted here before. The results have far exceeded their calculation. The factory is now running full time, and has many more orders than it can fill. Large additions are projected for the near fu-

ture. Several local lumbermen are interested in the factory, and only local woods are used. The product at present is twenty dozen chairs per day.

Work was commenced this week on the new saw-mill and planing mill of the Queen & Crescent Lumber Co. at Nicholson, Miss. The mills were recently partially destroyed by fire. The assurance has been adjusted. It covered about 30 per cent. of the loss. The company has purchased 25,000 acres of land in addition to its former holdings. The new saw-mill will have a capacity of 100,000 feet per day, and the planing mill will have a capacity of 80,000 feet per day. The company expects to start the machinery on January 10, 1902.

NEW ORLEANS' TRADE.

Its Increasing Importance as a Cotton Center.

In their annual report the board of directors of the New Orleans Cotton Exchange make the following interesting statements:

"In the future business, while there has not been the speculative activity which characterized last year, this has been offset by widening of the field of operations, and the volume of transactions has been greater. New Orleans has steadily gained in reputation as a safe and legitimate market for hedging, and our advantages as a natural cotton market are recognized as the surest protection for operators in contracts.

"Early last spring this board sent a delegation, consisting of Messrs. I. E. Glenny, Thomas D. Mather and Henry G. Hester, to the principal centers on the Atlantic seaboard to bring about closer trade relations with those sections. These gentlemen were cordially received at every point, and were assured of the warm interest felt in our great Southern market. The drawback to trading with us was alleged to be deficient telegraph facilities. This the delegation took up with the telegraph company, and the result has been considerable improvement. Our trade with the Atlantic States has increased since the delegation's visit, and will continue to do so if proper efforts are made to secure it. There is a warm and growing interest in our favor in the sections of the South that have heretofore been sending their business elsewhere, and this year's results show a distinct gain, but we cannot expect them to change the habits of years without persistent effort and constantly keeping before them, through individual representation, the decided advantages of our market. It is a question of strong business competition, with the advantage of a better, safer and more legitimate market in our favor, and the habit of years in favor of our competitors.

"The report of the supervision committee is of unusual interest. Both the supervision and levee inspection departments show satisfactory results, and the committee points out that New Orleans has regained a good part of the ground lost several years since in percentage of cotton crop handled. We quote the committee's words:

"'New Orleans still heads the list as the largest cotton port of the United States, a position she has always held except for the season of 1898-99, and which was then temporarily lost from abnormal causes. This year our total exceeds that of any other cotton port by 320,570 bales. We have handled across our wharves 24.06 per cent. of the total cotton crop of the United States, against 20.3 per cent. last year and 20.2 per cent. the year before.'

"In the face of a partial failure of the crop in Mississippi, one of our largest feeders, the gross receipts of 2,500,000 bales make a handsome showing.

"The committee also makes the gratifying statement 'that notwithstanding the large amount of cotton handled through our port, much less complaints about irregularities in the shipments have reached us from Europe and elsewhere than ever before.'

"This speaks volumes for our port opposing actual facts to complaints due to ignorance or malice."

SURPRISED THE TRADE.

Continued Good Demand for Iron at Birmingham.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., December 10.

The continued good demand for iron is just as much of a surprise to the trade here as it is anywhere else. The demand the past week was greater than that of the preceding week, and the prospect for its continuance is good. The volume of sales was easily equal to the output, though, except in the case of basic iron, there were no large transactions in iron. The character of the buying clearly indicates that some important interests held out for lower prices. The buyers now are looking for iron. Deliveries at long time are increasing. Until output is increased sales for the first quarter of 1902 are practically closed. A sale of basic iron, reported at 12,000 tons at $12, leaked out. The delivery is well distributed over the first half of 1902. This grade in price runs the gamut in values from gray forge to No. 1 foundry. No. 2 foundry went at $11.50. No. 3 foundry was in request at $11, and the demand exceeded supply. No. 4 foundry came in in some cases as a substitute, and was taken at $10.50. Gray forge was firm at $10.50. The market can be quoted as very firm at quotations, with a hardening tendency. At $12 for No. 2 foundry iron is not unreasonably high, and the ironmasters can book at that price a nice profit. The feeling is general that the market is headed for $12 for No. 2 foundry. That price would be so satisfactory that the market would be fed to the limit of production.

The North Alabama Coal & Coke Co. was incorporated this week, capitalized at $100,000.

A macaroni factory will be installed early in 1902.

The Electric Railway Co. broke ground today in changing the old dummy system to Bessemer to the trolley system.

J. M. K.

Texas Asphalt.

It is announced that the large asphalt-refining plant at Point Neches, near Beaumont, in which Memphis capital is largely interested, is awaiting the installation of machinery, and will be in full operation early next year. Mr. W. W. Talbert, vice-president of the company building the plant, in an interview in the New Orleans Picayune, said:

"We will produce absolutely pure asphalt, which will not melt at a temperature below 248 degrees, and any admixture of other material customarily used for such purposes as paving will raise the melting point, so that there will be no question that the Beaumont product will be the best on the market.

"Pure asphalt is only obtainable by refining, and where the other contents of the material used are worthless, refining cannot be done profitably. There is another refinery which obtains asphalt in a small way from the Ohio oil, but this is only a small matter, on account of the limited supply. Our supply is unlimited, and at present we are getting ready to refine 7000 barrels of crude oil per day, which will produce about 3000 barrels of asphalt. The other products of the oil will be utilized, of course.

"There will be the naphtha, gasoline and kerosene, which, together, amount to about 15 to 20 per cent., or from 1050 to 1400 barrels; sulphur will run pretty high, and may be as much as 300 to 500 barrels per day; then there will be the lubricating oils and the heavy gas oil, which, with a small waste, will constitute the balance. All these products have a very decided value, and it will be hard to tell all the by-products from the chief manufacture, so far as value is concerned."

The Appalachian Forest Reserve.

Editor Manufacturers' Record:

We have read with great interest the article by Dr. Dabney in your issue of October 31 on the Appalachian forest reserve, or, as it is generally designated in this section, the Appalachian National Park.

Now that the election is over, the people of Southwest Virginia are thinking and talking of this proposed reservation. It is the understanding among our people that the bill of Senator Pritchard of North Carolina does not take in any Virginia territory, and this would seem to be corroborated by Dr. Dabney's communication, in which he mentions being in Western North Carolina and East Tennessee, but does not refer to Virginia at all, though Congressman Otey of the sixth Virginia district was a member of the party.

White Top mountain, which Dr. Dabney mentions as being visible from Roan mountain, is situated in the Southeastern part of Washington county, Virginia, near the North Carolina line.

The starting point of the disputed State line is in the immediate neighborhood of White Top mountain, and it was here the commissioners appointed jointly by the States of Tennessee and Virginia began the re-running and location of that line.

White Top mountain is nearly 6000 feet above sea-level, and the view from its summit is of surpassing grandeur. It is quite a summer resort, and in addition to those visiting it for pleasure, large numbers of hay-fever sufferers each year receive great benefit from their visits.

On the summit of White Top the ground is almost level or slightly rolling. There is a most peculiar growth of stunted oak trees, resembling the pictures of those found in the frozen regions, and almost joining this growth of stunted oak is a grove of what is locally known as "lash-horn," the branches of which are so closely interlaced that birds can scarcely fly through them. Beyond these trees and on a gentle slope is an unusual growth of luxuriant grass which cattle eat in its green state, but which in the fall takes on a grayish color. This grass seen from a distance seems to be white, and gives the name of White Top to this mountain. It can be seen with the naked eye from points in Virginia, North Carolina, Tennessee and Kentucky. The several springs of nearly ice-cold water add to the attractiveness of this place. It should certainly be in the national park, as it is beyond doubt one of the most beautiful spots in the Appalachian territory.

It will soon be practicable to reach this point with comfort and convenience, as it is said to be the intention of the Virginia-Carolina Railway, which is now in operation to Damascus, Va., and Crandull, Tenn., to build an extension to the foot of White Top. It would be hard to find a more interesting section or one more bountifully supplied with mountain streams of clear, pure freestone water.

The fishing and hunting in these streams and mountains is of the best. The United States fish commissioner's car was over the Virginia-Carolina Railway recently stocking these streams with California trout. The speckled trout and black bass are native.

Among other interesting statements in Dr. Dabney's article we note the one regarding the destruction of the entire original growth of white oak, yellow poplar (tulip) and hickory. This has not been done in this territory, and along the Tennessee and White Top forks of the Laurel, Beaver Dam creek and the smaller streams the virgin timbers still exist and extend to the tops of the mountain, where the chestnut and chestnut-oak are found. Giant oaks, poplars, hickories and white pines still stand in their mature beauty almost untouched, except for neighborhood uses.

About a mile from Damascus on Beaver Dam creek there is a tulip tree marked as a (State) line tree which lumbermen say will saw out 3000 feet, board measure. This tree would not attract especial attention, except for the fact that it is a mark of the disputed boundary line, as there are many others as large.

Here is the meeting of the trees as well as "the meeting of the waters," the hemlock and the white pine of the North intermingling with the white oak and the poplar of the South. The forests have not been destroyed by the lumbermen, because until the building of the Virginia-Carolina Railway, which was opened for business in February of this year, there was no practicable way to get the timber out.

In this connection it is noteworthy that although the rainfall of last May was as great here as in the section described by Dr. Dabney, the damage was not nearly so great, and this was undoubtedly because of the better preservation of the forest.

At the present time the railroad is bringing out immense quantities of lumber logs, pulpwood and bark from the two large modern band mills and the numerous smaller mills which have been erected. The machinery for the 65,000-feet plant of the Empire Lumber Co. was hauled over the mountain eighteen miles into Shady valley, Tenn., nearly a year before the railroad was built, and when the first train reached that point between 5,000,000 and 6,000,000 feet of lumber were "on sticks" and ready for shipment.

It is authoritatively stated that Congressman Brownlow of East Tennessee will at the next session of Congress introduce a bill for an enlarged Appalachian forest reserve, taking in not only White Top mountain, but the many other peaks and knobs, valleys and streams in this section of Virginia, in addition to the territory embraced in Senator Pritchard's bill. Should this bill go through and the general government, in addition to preserving the forests, take care of the game and fish, build stageroads and hotels, allow extensions of the railroads and the establishment of hunting lodges, it would afford, in addition to the many other benefits, the greatest recreation ground in this country for a busy and overworked people.

As stated by Dr. Dabney, it would be easy of access to a greater number of persons than any other reservation.

Knowing the interest the Manufacturers' Record takes in all matters affecting the South's welfare, we believe it will be the pleasure of Mr. Edmonds, through his valued journal, to do everything possible not only to get the park established, but to have its boundaries enlarged so

that it will take in at least a part of beautiful and picturesque Southwest Virginia.

E. MUNSEY SLACK,
Editor Abingdon Virginian.

To Work for Industries.

In a letter to the Manufacturers' Record Mr. Thomas H. Arnold of Jackson, Tenn., writes:

"Jackson has just put on new and very aggressive life in the direction of progress, and through the Commercial Club, of which I have just been honored with the permanent secretaryship, expects to push unceasingly and untiringly the matter of the location of new enterprises and the upbuilding of those already in our midst. As you are aware, this section is rich in possibilities, and no place in the South offers more to the manufacturer and investor than Jackson. We hope to become a power in the South and to set an excellent example for our sister cities.

"If you chance to know of anyone looking for a location for a knitting mill or a bed-comfort factory, we can offer them exceptional advantages."

Novel Irrigation Plan.

A letter from Austin, Texas, to the Manufacturers' Record says that Mr. R. H. Russell of San Antonio and Mr. J. A. Simmons of 20 Broadway, New York, are organizing a company to use the sewage of San Antonio to irrigate nearby lands for alfalfa, rice, garden truck, etc., after the system followed at Paris and Berlin. They have made a contract with the city of San Antonio, and have secured Mitchell lake as a reservoir. One mile of tunnel work and four miles of open-ditch work will have to be done.

Another Shipyard.

It is stated at Norfolk that active preparations are being made for the establishment there of another shipyard, in addition to the plants recently announced. This latest plant, it is reported, will be built by the Degnon-McLean Contracting Co. of New York city, and will be designed for the construction and repair of a smaller class of vessels than will be handled by the other proposed shipyards. The company's plant will include a marine railway, and possibly a floating dry-dock.

Texas Nearly a Billionaire.

Texas is nearly a $1,000,000,000 State. The assessed values of property for 1901 is $981,701,948, an increase over last year of $67,694,314. During the last fiscal year 3,676,708 acres of land were added to the tax-rolls, the increase in the value of land in the State having been $22,354,388. Since 1871, when the assessed value of property in Texas was $171,818,986, that value has increased 471 per cent.

Southern Asbestos.

The bulk of the 1054 short tons of asbestos, valued at $16,310, produced in the United States in 1900 was mined at Sall Mountain, White county, Georgia. There is a constantly-increasing demand for the mineral, and new sources of supply are appearing. The mineral has been found near North Wilkesboro, N. C., and is reported in the central portion of Bedford county, Virginia.

Another addition to Norfolk's present shipbuilding interests will be the marine railway and ship-repair plant of Messrs. Allen & Weaver, now operating at Berkley. This firm has secured site, and will remove its plant to Norfolk, where it will employ a considerable number of men in repairing small steamers and large schooners, also other vessels.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Terminals at Washington.

The incorporation of the Washington Terminal Co., with $5,000,000 capital stock, is a step in the proposed railroad improvements to be made in that city, which have been referred to several times in the Manufacturers' Record. Senator McMillan of the District of Columbia committee of the Senate, and President Casastt of the Pennsylvania Railroad Co. have practically agreed upon the best method of constructing approaches to the proposed union station and the site for the station itself. The terminals will be used by every steam railroad line entering Washington, and the connecting track will be placed above or below grade crossings. Work will probably begin upon the bridge across the Potomac river, to be built in connection with the terminals, within the next six months. Including this bridge, it is estimated that fully $5,000,000 will be expended in the improvements. The Terminal Company, which, it is understood, will represent the Pennsylvania and the Baltimore & Ohio railroad companies in the project, includes G. L. Potter and J. M. Graham of Baltimore. Mr. Graham is chief engineer of the Baltimore & Ohio, and his association with the Terminal Company would seem to indicate that he will take an important part in carrying out the work.

Mr. Gould in New Orleans.

Mr. George J. Gould, who recently visited New Orleans, is quoted as saying that the section of the Texas & Pacific Railroad between New Orleans and Baton Rouge is to be relaid as soon as possible with 75-pound rails. The company is also constructing an extension from Arkansas City to Lake Providence, La., which will be operated as a branch of the Texas & Pacific.

Referring to the export trade of New Orleans, Mr. Gould stated that it is expected to have the grain elevator under construction at Westwego, in the suburbs, completed by February 1, if not sooner. He gave the opinion that the canal across the isthmus will be of great benefit to the city in forming a means for shipping cotton direct to China and Japan, also for communication between the western coast of South America and the United States.

To Be Built at Once.

In a letter to the Manufacturers' Record Mr. George Hayden, president of the Fort Smith & Western Railroad Co., which is building a line between Fort Smith, Ark., and Guthrie, Okla., writes that contracts have been let for fifty-five miles of the line, and surveys for the entire distance completed. The company is ready to let contracts for the balance of the distance with a view to completing the road within the next year. The total length of the Fort Smith & Western will be 175 miles. J. J. Mahoney at Fort Smith is general manager of the company.

Order from the Pennsylvania.

The Richmond Locomotive Works has secured recent contracts for sixty-eight freight engines. Thirty-eight of the locomotives are for the Northern Pacific system, fifteen for the Pennsylvania and fifteen for the Colorado Southern. The order by the Pennsylvania Company is said to be the first ever placed outside of its own works and Philadelphia and Pittsburg companies. As its specifications require locomotives of the highest standard, the contract secured by the Richmond company is an evidence of the reputation it has with the Pennsylvania Company.

Electric Line in Florida.

According to advices from Xenia, Ohio, Mr. John P. Martin of that city, who is interested in the promotion of an electric railway system between Tampa, St. Petersburg and several other towns in Florida, has let contracts for power-house machinery, and has given an order to the Jewett Car Co. of Newark, N. J., for forty-three cars, which are to be used upon the line in question. It is stated the contracts represent an outlay of about $2,000,000. It is understood that work is to begin immediately upon the electric railway system.

Contracts for Terminals.

A dispatch from Mobile, Ala., states that the Mobile, Jackson & Kansas City Railroad Co. has awarded contracts for its terminals on the harbor. They include coal chutes and a machine shop. The contract for one of its piers is to be let in a few days. As already stated in the Manufacturers' Record, arrangements have been made to extend the road further north into Mississippi. It is probable that it will be connected with some line reaching Memphis, Tenn.

Decatur to Jasper.

Mr. John Carlisle of Cincinnati, Ohio, a promoter of the Central Railway of Alabama, writes to the Manufacturers' Record that a company has been organized and will build between Decatur and Jasper, a distance of seventy miles. Preliminary surveys have been made, and it is expected to let contracts as soon as a permanent location has been completed. No arrangements have been made as yet for a bond issue.

Railroad Notes.

A recent shipment of rice from the fields of Eastern Texas was received at Houston. It consisted of twenty-nine carloads, or a total of 8700 sacks.

Negotiations are in progress for consolidating the electric railroads in Chattanooga, which at present are controlled by two companies. It is stated that a distinct corporation will be organized to own and operate the properties.

The Atlantic Coast Line Railroad Co. has purchased property at Petersburg, which, it is understood, will be used for the construction of a passenger depot, and possibly a hotel. It is also stated that the company may build several warehouses.

The report that the Seaboard Air Line Railway Co. has purchased 10,000 tons of 75-pound rails to be used on various portions of the line is confirmed by President John Skelton Williams. Other appropriations include money for 1000 freight cars and twenty freight locomotives.

A dispatch from Dickson, Ky., says that the Illinois Central Railway Co. has secured what is known as the Kentucky Western Railroad, extending through a portion of Webster county. The line is twenty miles in length, and was constructed by a company of which Irving H. Wheatcroft is president.

The passenger department of the Southern Railway Co. has issued a folder descriptive of the Charleston Exposition which is of more than usual merit. It is beautifully illustrated with half-tone engravings, and contains an excellent description of Charleston, Summerville and the exposition itself. The folder was the idea of Mr. S. H. Hardwick, general passenger agent.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

GEORGIA'S NEW COTTON.

A Development in the Staple in Lee County.

In a letter to the Manufacturers' Record Mr. A. B. Duncan of Leesburg, Lee county, Georgia, referring to a reported new variety of cotton, writes:

"Mr. C. H. Beazley discovered the cotton by accident in his field and planted it. We said nothing about it at the time, believing it to be a freak of nature. But this year proves to us that the seed will prove true. The cotton selected and presented to the agricultural department of this State runs all along from ten to twenty locks to the boll, the twenty locks not being as fully developed as the ten to fifteen locks. Still the number of locks have a fully-developed staple of cotton. The staple is good, and equally as long, if not longer, than the ordinary cotton of the country. The seed are small, and may be made by cultivation to yield half seed and half lint; that is, 1000 pounds of seed cotton will yield a bale of 500 pounds of lint. With this advantage, and the ability of planting in three-foot rows and twelve to fourteen inches in the drill, I believe when fully developed the cotton will produce two or three times as much lint cotton on the same acreage as the common cotton of the country. Still the cotton is in its infancy, and we are unable to say what the future will do for us, but we will go on and do all we can to develop what we have."

Cotton Estimates.

Mr. A. S. Johnston of Meridian, Miss., who stands very high as an authority on the cotton movement of the country, made a notable hit in the last circular issued by him on November 30. In it he said that the farmers of the country should thank the Agricultural Department of the government for holding in check the immense pressures that have been brought to bear upon prices through the circulation of fabulous figures for this year's crop, as the majority of the trade had never believed that these figures would be substantiated by the Agricultural Department in its estimate of December 3. Mr. Johnston himself, with most liberal allowance of 3,000,000 bales to Texas and the Territories, suggested that ultimate results might be 10,300,000 bales, but he added:

"It would not be surprising if the crop should be 10,000,000 or under."

He stated further that the government estimate, which should carry immense weight and influence, was the only one that would cause him to change his figures, should it differ materially from those advanced under date of November 30. The statistician of the Department of Agriculture reported on December 3 as the probable cotton production of this season 9,674,000 bales. This is mighty near the general estimate of Mr. Johnston.

The Cotton Movement.

Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight for the first three months of the present season was 4,780,556 bales, a de-

crease under the same period last year of 34,506 bales. The exports were 2,522,976 bales, an increase of 161,374 bales, the takings of Great Britain being short and the increase showing in France and the rest of the European Continent. Takings by Northern spinners were 683,638 bales, a decrease of 30,728; by Southern spinners 519,196 bales, an increase of 92,324.

During the ninety-seven days of the season up to December 6 the amount brought into sight was 5,172,425 bales, a decrease of 37,909 bales; the exports were 2,766,162 bales, an increase of 178,456; takings by Northern spinners 750,442 bales, a decrease of 64,593; by Southern spinners 558,196 bales, an increase of 96,958 bales.

Gainesville Cotton Mill.

The stockholders of the Gainesville (Ga.) Cotton Mill met during the past week and elected directors as follows: Messrs. S. M. Milliken of New York; N. W. Rice of Boston, Mass.; J. W. Danielson of Providence, R. I.; J. H. Montgomery of Spartanburg, S. C.; Geo. W. Williams, Jr., and Wm. M. Byrd of Charleston, and H. H. Dean of Gainesville. This company is to operate the plant just completed, and in which will be installed the 25,000 spindles and 748 looms previously operated at Charleston, S. C., by the Vesta Mills. The main building is five stories high, 130x330 feet. Eighty operatives' cottages have been erected also. Messrs. Lockwood, Greene & Co. of Boston planned the mill, and Messrs. G. H. Cutting & Co. of Boston erected the buildings.

$100,000 Mill for Demopolis, Ala.

Efforts that have been in progress at Demopolis, Ala., for the erection of a cotton factory resulted this week in the organization of a $100,000 stock company to build and operate such a plant. The Bessie Minge Manufacturing Co. is the title chosen, and officers have been elected as follows: President, J. H. Minge; vice-president, W. C. Harrison; secretary-treasurer, J. C. Minge. The board of directors includes, besides those named, Messrs. Benj. F. Elmore and W. C. Harrison, Jr. Site has been chosen for the enterprise, and the details as to equipment, etc., are being considered.

To Add 4000 Spindles.

The Willingham Cotton Mills of Macon, Ga., has completed the erection of the additional structure, on which work has been progressing for some months. This addition is a four-story building 100 feet long, and is to contain considerable machinery. The new machinery will include 4000 spindles and 100 wide looms, for the production of wide twisted cotton duck. Company's present spindles number 8208. About $75,000 is the expenditure for the improvements here mentioned.

Textile Notes.

The erection of a cotton-yarn factory is talked of at Carnesville, Ga.

Endeavors are being made to organize a cotton-mill company at Port Gibson, Miss.

It is reported the Klots Throwing Co. of Cumberland, Md., is putting in new additional machinery.

Buckhannon (W. Va.) Woolen Mill Co.'s plant was destroyed by fire during the week, the loss said to be $18,000.

Messrs. George C. Wallace and Robert B. Phillips have leased and will operate the Alden Knitting Mills at Paducah, Ky.

Messrs. Alvis Steinhouser, N. J. Bakke and Henry L. Persson have incorporated the Carolina Sizing Co. of Charlotte, N. C., for manufacturing sizing for cotton warps.

Levi Cotton Mill of Rutherfordton, N. C., will increase capital from $100,000 to $200,000, but for what purpose is not stated.

It is stated that arrangements are being made to put in operation the Dardanelle (Ark.) Cotton Mills, a plant of 3000 ring spindles.

A movement is on foot at Claremont, N. C., for the organization of a cotton-mill company, and J. W. Setzer is promoting the movement.

A company is organizing for the establishment of a knitting plant, and it is said that sufficient capital has been subscribed. Possibly J. A. Martin can give information.

Messrs. J. A. Martin, T. J. Lutz, J. L. Latta and J. R. Gaither of Hickory, N. C., have incorporated the Catawba Wool Mills for the manufacture of woolen yarns and cloth.

Kinston (N. C.) Cotton Mills has filed amendment to its charter allowing an issuance of $25,000 worth of preferred stock to pay for additional machinery and for operating capital.

Tupelo (Miss.) Cotton Mill has booked an order to furnish 100,000 yards of heavy drilling for shipment to China. This plant was completed a few months ago, and operates 5000 spindles, with 150 looms.

The Elizabeth Mills of Charlotte, N. C., previously mentioned, commenced production this week, starting 5000 spinning and 2500 twisting spindles on the production of two-ply yarns, made from Egyptian cotton.

Elizabeth City (N. C.) Cotton Mills is considering the resumption of night work, which will about double its production of yarns, now 20,000 pounds per week. The equipment is 10,000 spinning and 4500 twisting spindles, etc.

It is stated that a mill for the manufacture of cotton denims will be built at Pell City, Ala., by local investors. A plant of such extent as to employ 750 operatives and consume 12,000 bales of cotton annually is contemplated.

Lavonia (Ga.) Cotton Mills states that it has no present intention of doubling its 2500-spindle plant, a step that had been rumored as to be undertaken. This mill has been running only six weeks, starting as soon as it was completed.

Tucapau Mills Co. of Tucapau, S. C., has in view extensive enlargements to its print-cloth mill. A meeting of the directors was held last week to consider these improvements. The mill at present has 28,000 spindles and 770 looms.

The court sale of the Fairmont (S. C.) Mills, held last week, resulted in the disposal of the property to Col. Joseph Walker for $75,000. The purchaser is one of the largest stockholders in the company. Operations are now being continued.

Messrs. A. P. Mathes, H. H. Kirkpatrick, S. C. Williams, E. H. Bachman, A. S. N. Dobson, M. S. Elsea and John D. Cox have incorporated the Jonesboro (Tenn.) Yarn Mills, with capital stock of $25,000. This is an established plant of 3500 spindles, and Mr. Mathes is manager.

The committee recently mentioned as investigating as to the establishment of a cotton factory at Brenham, Texas, has made its report. It is recommended that a $150,000 company be organized to build for 5000 spindles and 150 looms. Messrs. D. C. Giddings, Jr., F. W. Wood and R. A. Schuerenberg compose the committee.

The Mathis & Davis Co. of Chattanooga, Tenn., finds the demand for its ribbed hosiery so increasing that a doubling of productive capacity has been decided upon. Preparations are now being made to erect a new building and add the necessary machinery. This company is capitalized at $50,000, and now operates ninety knitting machines.

Messrs. C. N. McLean and John E. McMurty of New York, who purchased the Buena Vista (Va.) Woolen Mills several months ago, have that plant in full operation now. The mill had previously been idle for some time. It has a capacity of 1000 yards of cloth per day, and sixty operatives are employed. Product is mainly cushion cloth for vehicles.

The directors of the Lowe Manufacturing Co. and the Eastern Manufacturing Co., both of Huntsville, Ala., are to meet to provide for the doubling of their respective plants. The recent meeting at which this extension was determined upon was mentioned in this column. Lowe Company has $100,000 capital and Eastern has $50,000. Both plants were completed recently.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, December 10.

No. 10s-1 and 12s-1 warps	13½@—
No. 14s-1 warps	14 @—
No. 16s-1 warps	14 @14¼
No. 20s-1 warps	14½@—
No. 22s-1 warps	15 @—
No. 26s-1 warps	15½@—
No. 6s to 10s bunch yarn	13 @—
No. 12s-1	13½@—
No. 14s-1	14 @—
No. 16s-1	14 @—
No. 20s-1	15 @—
No. 22s-1	15 @—
No. 26s-1	15½@—
No. 8s-2 ply soft yarn	13½@—
No. 10s-2 ply soft yarn	13½@14
No. 8s-2 ply hard	13 @13½
No. 10s-2 ply hard	13½@—
No. 12s-2 ply hard	14 @—
No. 14s-2 ply	14 @—
No. 16s-2 ply	14¼@14½
No. 20s-2 ply	15 @—
No. 24s-2 ply	16 @—
No. 26s-2 ply	16 @—
No. 30s-2 ply yarn	17 @—
No. 40s-2 ply	22 @—
No. 8s-3, 4 and 5 ply	13 @—
No. 20s-2 ply chain warps	15 @—
No. 24s-2 ply chain warps	16 @—
No. 26s-2 ply chain warps	16½@—
No. 30s-2 ply chain warps	17 @17½
No. 16s-3 ply hard twist	14¼@—
No. 20s-3 ply hard twist	15 @—
No. 26s-3 ply hard twist	16 @—

Market strong, with fair demand.

Immigration for the Southwest.

Mr. Geo. M. McKinney has been appointed general immigration agent of the Southern Pacific Railway system for Texas and Louisiana, with headquarters at Chicago. Mr. McKinney is a native of Louisiana, although he has been located in the Northwest for a period of years securing immigrants for property along the Northern Pacific, with which he has been identified. Mr. McKinney is very optimistic about the possibilities of increasing immigration to the Southwest, and believes that this section of the country will attract far more settlers than thus far have been induced to locate in it.

The Carolina Steamship Co. has been organized for the purpose of operating another line of vessels between Wilmington, N. C., and New York. Among those interested are C. W. Worth and J. A. Taylor of Wilmington. The company announces that it has secured one vessel, which will leave for its first trip to the North about January 1.

The Rowanmore of the Johnston Line sailed from Baltimore last Saturday with 12,500 tons cargo, valued at $701,489. The cargo included lumber, cotton duck, copper, naval stores, tobacco, wheat, furniture, cotton, tallow, flour, oatmeal, steel rails and live-stock.

One day last week seven British transports were at the docks and one was in midstream at Port Chalmette, La., near New Orleans, awaiting cargoes of horses and mules to be used in the war in South Africa.

The American Salt Co. of Louisiana will operate a barge line between Galveston and Morgan City.

COTTONSEED OIL.

Cottonseed Machinery Wanted.

The Upper India Chamber of Commerce of Cawnpore is seeking estimates from American manufacturers of cottonseed-oil machinery for a small plant complete, including machines for stripping the lint from the seed, removing the shell, grinding the kernel and pressing the meal for oil, and also for an oil-refining plant, to include the arrangements necessary to enable the wastes given off by the oil in the process to be utilized in soap-making. This request is for the purpose of making the experiment, which, if successful, will be followed naturally by orders for large machinery. Mr. George Wilson, secretary of the New York Chamber of Commerce, 32 Nassau street, New York, will be glad to receive communications on this subject.

Cottonseed-Oil Notes.

It is stated that an agent of a number of Texas oil mills has purchased in Mississippi during the past month about 800 carloads of seed in the Delta, to be delivered to the Texas mills at $19.50 per ton.

The Transatlantic Trading Co. of Galveston, Texas, reports the shipments of cottonseed for November as follows: From Galveston, 29,235 tons of cottonseed meal and 8680 tons of cottonseed cake, and from New Orleans for November, 8245 tons of meal and 29,450 tons of cake.

The Planters' Oil Works Co. has been incorporated at Clarksdale, Miss., with a capital stock of $75,000. Ground has been broken for the erection of a 75-ton cottonseed-oil mill. The officers of the company are C. W. King, president; A. J. Moseley, secretary and treasurer, and C. L. Wortham, manager.

The Mississippi cottonseed-oil mills are receiving large orders from Iowa and Illinois for cottonseed meal and hulls for feeding to cattle. The Mississippi Cotton Oil Co. at Grenada has orders for thirty-two carloads of meal and hulls. The difficulty in getting cars for shipment is restricting trade in this industry.

The following quotations on cottonseed products were made by exporters at Galveston on the 9th inst.: Prime crude cottonseed oil f. o. b. Texas mills, 30 cents, and prime refined in barrels, 35 cents f. o. b. Galveston; prime cottonseed cake, $23.75 per short ton f. o. b., and prime cottonseed meal, $24; linters f. o. b., compressed, choice, 3⅜ cents; A, 3 cents, and B, 2⅝ cents.

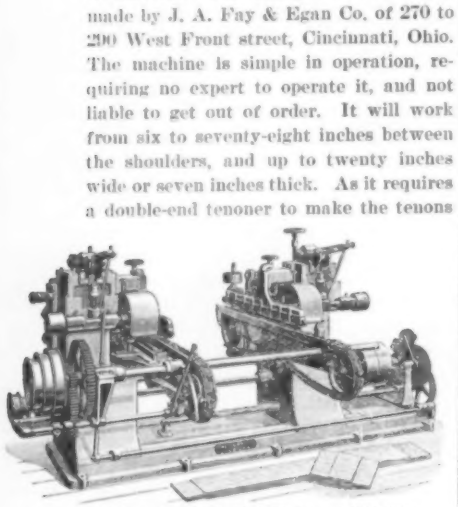
The board of agriculture of North Carolina last week imposed a tax of twenty cents per ton on cottonseed meal used as fertilizer, and places it under the same rule as other fertilizers. It also requires all cottonseed meal sold in the State for feed to be branded, that containing 8 per cent. or more of ammonia to be first grade, and all containing a less percentage to be second grade.

The following are the official quotations of cotton and cottonseed products, as posted at the New Orleans Cotton Exchange on the 9th inst.: Prime refined oil in barrels, per gallon, 37 cents; off refined oil in barrels, per gallon, 36 cents; prime crude oil, loose, per gallon, 31 cents; prime cottonseed cake, per ton of 2240 pounds, $26.25; prime cottonseed meal, per ton of 2240 pounds, $26; soap stock, per pound, 1.17½ cents; linters, A, per pound, 3⅛ cents; B, 2⅝ cents; C, 2⅛ cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, $14; in bulk delivered at New Orleans, per ton of 2000 pounds, $13.

MECHANICAL.

No. 10 New Double Tenoner.

The machine illustrated herewith has a record for doing a large amount of work in different woodworking factories. It is made by J. A. Fay & Egan Co. of 270 to 290 West Front street, Cincinnati, Ohio. The machine is simple in operation, requiring no expert to operate it, and not liable to get out of order. It will work from six to seventy-eight inches between the shoulders, and up to twenty inches wide or seven inches thick. As it requires a double-end tenoner to make the tenons



No. 10 NEW DOUBLE TENONER.

accurate and perfect, the worth of this machine will be readily appreciated.

It will cut off, tenon and cope both ends at one operation accurately and rapidly, and without marking work. The machine resting on a platten or base, insures superior support, stiffness, perfect smoothness and freedom from vibration.

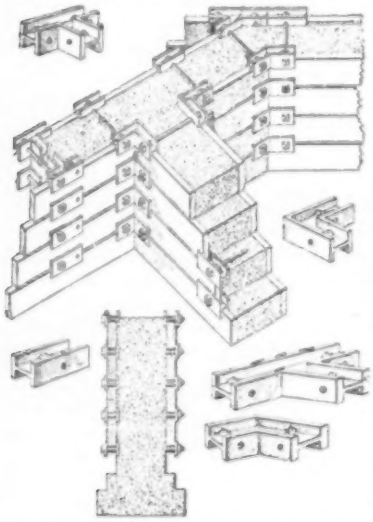
The feed is of improved construction, automatic, and capable of standing much wear. Arrangements are made for working difference in widths and thicknesses. It can also be used as a double cut-off saw. The saws are adjusted vertically and horizontally.

Any further particulars of this improved labor-saving tool, together with terms and illustrated poster showing it with other machines, will be furnished by the maker on application.

Molding Concrete Walls.

A very efficient builders' mold has been devised for this purpose by Thomas C. Farrell of Washington, N. J.

As the illustration shows, the mold for the concrete wall is made of planks set on edge, the combined boxcap and shoeplank holder for these planks comprising vertical sides connected by a horizontal web, giving the construction an H cross-



Builders' Mould For Wall Construction.

section. The webs have small spurs, which firmly engage the planks. The combined boxcap and shoeplank holders are connected in transverse pairs by tie-bolts.

The combined boxcap and shoeplank holders thus constructed may be given any desired form. The T form is useful at the end of a wall; the straight form is employed to join together the meeting ends of two of the planks, and also to strengthen the planks at points between their ends; the L form is used when the rectangular branch of the wall is to be made; the obtuse-angled form is designed for use at the inside of a branch to or bend in the wall, and the Y form is to be used at the outside angle of an obtuse bend.

In building a wall four or five courses of planks are placed on top of one another—sufficient to give the foundation its proper strength. The lower planks are then taken out and used again at the top of the wall, the concrete being filled as before. The wall may therefore be built to any desired height without the use of continuous sheathing.

By means of the invention any intelligent, practical builder can construct a fireproof dwelling without the use of timber, iron or steel, quarried stone or bricks.

Full particulars relating to this builders' mold can be obtained from the inventor, Thomas C. Farrell, Washington, N. J.

Improved Pumping Engine.

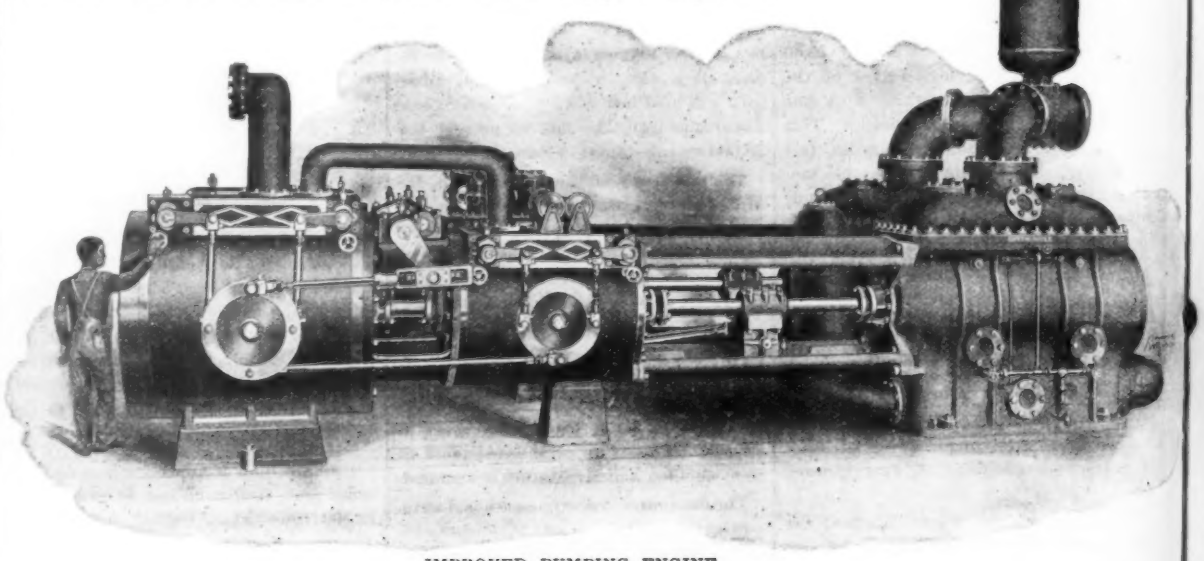
The Stilwell-Bierce & Smith-Vaile Co. of Dayton, Ohio, has constructed and recently installed on foundations at the Upper Lake pumping station at the National Military Home near Dayton one of its latest improved pumping engines of the horizontal compound direct-acting type, operating non-condensing. The "Home" had in operation at this pumping station for some time past two pumping engines of large capacity, but an adequate supply of water was not furnished, and the officials determined to install a pumping engine which would be sufficiently large for some time to come.

The illustration herewith shows the general arrangement of cylinders, etc. The unit is a 36-inch stroke. The diameters of the various cylinders are as follows: High-pressure steam cylinder, 24 inches; expansion cylinder, 36 inches; diameter of water plunger, 18 inches; capacity, 5,000,000 United States gallons in twenty-four hours at 100 feet of piston travel. The pumping engine will receive its supply from the large lake and deliver into the standpipe, operating under a dynamic head of approximately eighty pounds per square inch.

The engine embodies all the latest improvements. The steam valves, both for the initial and expansion cylinders, are of the semi-Corliss type, half rotative pattern. The wrist plates are of polished iron, circular in form, and connected thereto are the valve stems operating the semi-Corliss valves. The entire valve gear is made of steel. Each valve stem and rod is provided with bronze head, with an adjustment device for compensation of wear. Valve stems, as well as the heads, are highly polished. The crossheads are of the latest improved type, and furnished with guides, which are located in the distance pieces. Direct connection is made between the crossheads and the wrist plates. The steam cylinders are provided with jackets of polished steel, held in position with polished brass bands. The outboard steam cylinders are also provided with polished false heads of ornamental design.

The water end is provided with two plungers, each eighteen inches in diameter and having a 36-inch stroke. The water cylinders are of the removable type, cast entirely separate from the main water boxes, and can be taken out and rebored when worn. Very liberal valve area and water passages are provided. The main walls of the water-box casting are strongly ribbed, thus giving a large factor of safety above the working pressure. All valve-seats, stems and springs are of the best phosphor-bronze.

The manufacturer will be glad to give prices, information, etc., on application.



IMPROVED PUMPING ENGINE.

A Useful Ornament.

The use of water as an addition to the ornamenting of grounds is recognized as of great benefit by landscape gardeners and others. In the form of fountains or

LAWN SPRINKLER.

lakes it is a very desirable feature. A simple yet beautiful display can be made by the modern lawn sprinkler, which also has the valuable feature of being movable. Many improvements have been made in this form of apparatus in recent years, as indicated by the catalogue of the Pleuger & Henger Manufacturing Co. of St. Louis. This company has placed on the market a number of popular designs, including the Cactus, the Japanese, the Park, the National and the Imperial. Some of the sprinklers can be moved around the grounds without turning off the water, while the different formations of water produce a very artistic effect. A very simple form of the equipment is shown in the accompanying illustration.

The sprinklers manufactured by the company referred to have the merit of being durable, simple to operate, and are offered at very low rates. They are manufactured to fit hose of different sizes, and to cover a variety of areas of lawn.

A Company That Buys Cities.

One frequently hears of buying houses, lots and farms, but the idea of purchasing a city seems beyond belief. A Chicago company, however, is engaged in not only buying, but tearing down cities such as those created by the World's Fair and the Pan-American Exposition; in fact, the Chicago House Wrecking Co. was organized in 1892 for the express purpose of purchasing the buildings comprising the White City and dismantling them. When it is realized that these structures cost over $33,000,000, an idea of the gigantic task can be appreciated, but the work was done in a remarkably short time, and carried out successfully. Not satisfied with this undertaking, the company purchased and removed the buildings of the famous Trans-Mississippi Exposition, held at Omaha, and has recently made a contract to dismantle the Rainbow City at Buffalo. The contract requires it to remove all of the material, which includes over 33,000,000 feet of lumber, 44,000 square feet of windows, 22,000 square feet of doors, 2000 tons of pipe and structural iron, in addition to 1,000,000 feet of wire, 600,000 square feet of roofing tiles and millions of bricks. The electrical apparatus alone includes 200,000 incandescent lights, and power was supplied by twenty-five automatic engines and nineteen immense steam boilers, also bought by the company. For several weeks arrangements have been made to receive this material at the company's extensive plant in Chicago, where large buildings are being cleared to receive the contents and railroad tracks built into the premises, as it is thought fully 1000 freight cars will be required for the removal.

Speaking of the magnitude of the work, the general manager of the House Wrecking Company in an interview says: "It will be a matter of but a few days to get a force of men sufficient to do the work. We contemplate that in the time limit of 150 working days 600 men can remove the buildings, but in restoring the grounds it will require at least 400 men a similar length of time. Of course, much of this work may possibly be done together and at the same time. However, our contract will mean the employment of a working force of not less than 1000 people if the work is to be done in contract time. We will employ most of our labor in Buffalo.

Only the experienced wrecking foremen, whose experience tells them what is valuable and what is not, and how to preserve the material and to restore it, will be taken from Chicago. This will mean a force from our Chicago plant of about fifty foremen, with an equal office force. It will be necessary for us to permanently lease a large tract of land in Buffalo with railroad facilities where we can store the salvage. On the property we will have to erect a building for the storage of property which would be damaged if exposed to the weather. This, of course, means an added expense, and will require considerable time. The contract will practically compel us to locate a permanent establishment in Buffalo, and we may retain the supply-house and yards for years to come. We are thinking somewhat of building permanent yards and making it a general supply-house for the East. This is, of course, providing we find Buffalo a profitable point for such an establishment. It will not at all affect our Chicago plant, even though it is our intention to make our Buffalo establishment as large or nearly so. We have an idea there is an excellent field in the East for this business, and this contract will give it a thorough test."

The Chicago House Wrecking Co. is a unique corporation of its kind, and probably sells more second-hand material than any other concern in the world. Its success has been largely due to regular advertising in the Manufacturers' Record and by distributing catalogues containing a complete list of the many classes of goods which it offers for disposal. Buying as it does on such an enormous scale, it can sell articles at greatly reduced prices.

Some months ago the Manufacturers' Record took pleasure in commenting upon the practical tone of a newly-founded publication, The Worcester Magazine of Worcester, Mass. The magazine was regarded as a token that Worcester, with all its accomplishments industrially, was moved by the noble discontent which looks to greater deeds. To this publication now has been added in Worcester another, The Applied Arts Book, a monthly intended to develop interest in instruction in applied arts in the public schools. The articles are of a practical nature, and the writers have made their own illustrations, giving them perfect accord with the text. As an example of applied art in magazine-making the first number gives excellent promise, and does justice to its title.

Cassier's Magazine of illustrated engineering has the following articles in its December number: "Town Refuse Disposal in Great Britain," by W. Francis Goodrich, A. I. Mech. I.; "Petroleum in California," by W. L. Watts, E. M.; "Forced Draught," by William H. Booth; "The Nile Dam at Assouan," by A. J. Liversedge, A. M. Inst. C. E.; "Wages and Labor in the American Steel Trades," by William Garrett; "Unfinished Inventions," by C. W. Scribner; "By-Product Coke Ovens," by Frank H. Crockard.

Arrangements have been made to operate a regular steamship service between Mobile and Tampa, Fla. Cargoes of oranges and fruit from Southern Florida will be taken to Mobile. James McKay of Tampa is understood to be interested in the matter.

The sales in the Joplin (Mo.) district during the week ended December 7 were 10,735,140 pounds of zinc ore and 1,579,000 pounds of lead ore.

The exports from Pensacola during November were valued at $2,088,871, nearly $1,000,000 more than their value in November, 1900.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., December 11.

The week under review has shown a fair volume of trade in nearly all branches of the lumber market. The demand at this period of the year is generally light, especially from local dealers, but this season there is an unusual call for material. The local building demand is especially strong, as numerous buildings are projected, and at suburban points many improvements are going forward. The situation as viewed by prominent lumbermen is considered very satisfactory, and stocks at all milling points are being rapidly shipped on leaving the saw. The North Carolina pine business is at the moment in good shape, prices very steady, and the demand active. Stocks are not accumulating to any extent, and for all desirable grades of lumber values are a shade higher. White pine is being traded in very liberally, and the demand quite free, while prices are steady, with the supply not excessive. Cypress, spruce and hemlock are in good request, while poplar is prominent as to value and demand. In hardwoods generally the tone is much improved, and prices for all desirable lumber are very steady. Much activity is reported among hardwood mills in West Virginia, and the output is generally larger than usual, in order to supply the demand. The foreign hardwood business as reported by local exporters is slightly improved, owing to favorable advices from Europe. The London market is showing up better, with prices firm at a slight advance, and stocks being gradually reduced.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., December 9.

In reviewing the lumber trade of this section it may be stated that the indications in almost every avenue of the industry are very favorable for a good winter's business. The various corporations which constitute the North Carolina Pine Association regard the outlook with much satisfaction, as under the policy of this association stocks of lumber have not accumulated, the output being restricted to immediate or near future wants. The tone of prices continues of a healthy character, and the demand at the moment is most pronounced, the mills at various points being obliged to run at their full capacity to satisfy orders on file. The demand for the United Kingdom and continental ports is beginning to set in again, and shipments coastwise still continue much heavier than at the same period last year. In the hardwood trade of this section there is a notable improvement, with a good local and foreign inquiry. The local demand for all kinds of lumber for building purposes is of increased volume, and city and suburban points are placing large orders for material. Among all the woodworking concerns of Norfolk there is unusual activity; planing mills, box factories and others are all enjoying considerable business at prices leaving a fair margin of profit.

Savannah.

[From our own Correspondent.]
Savannah, Ga., December 9.

In this section of Southern Georgia the activity in all lines of the lumber trade is greater than at any time during the past six months. Orders from Northern and Eastern points are coming in freely, and as the holidays are near at hand, mills are rushing the work to complete orders on file. Prices continue to show a firm tone, and f. o. b. quotations are as follows: Minimum-sized yard stock, $14.50 to $15; car sills, $15 to $15.50; ship stock, $23. Sawn ties are quoted $11.50 per 1000 feet and hewn ties 40 cents each. The second steamer of the Northwest Steamship Co. is here, and will load with 1,500,000 feet of lumber. During the past week over 3,000,000 feet of lumber has left this port, and from the number of charters reported it is expected that shipments for the present month will be very heavy. The movement at Brunswick is quite as active in all lumber circles as at any of the Georgia ports, and the demand for lumber and crossties is quite pronounced. There is a better foreign demand in the Brunswick section, and exporters look forward to a heavy trade during the winter months. Lumber freights are very steady, and shipments of yellow pine and cypress continue liberal. In the crosstie trade the improvement is most marked, and shipments have been good during the fall, and are likely to show a marked increase during the winter months. The schooner Francis C. Trunmell is now about finished loading a cargo of 23,000 crossties. The following charters were reported last week: Schooner Jennie E. Righter, 615 tons, Brunswick to New York with switch ties at 17 cents, and schooner Almeda Willey from Brunswick to New York with lumber on private terms.

Mobile.

[From our own Correspondent.]
Mobile, Ala., December 9.

The sawn-timber market is engaging the attention of exporters and manufacturers, and at the moment the stock of timber is well cleaned up. Values are firm and advancing, and receipts are expected to be very light for some time to come on account of the rivers being so low. Mills are all busy, and are generally running at their full capacity. At Moss Point mills are enjoying a good business season, there being a liberal output of timber, which is sold as it leaves the saw. Sawn timber when placed upon the market will bring 14½ to 15½ cents per cubic foot, and hewn timber 13½ to 15 cents. During the past week the following shipments were reported: Bark Kings County for Portsmouth with 41,662 cubic feet of sawn timber, 7505 cubic feet of hewn timber and 23,807 feet of lumber; bark Marie for Amsterdam with 80,622 cubic feet of sawn timber and 2015 cubic feet of hewn timber; bark Premier for Buenos Ayres with 67,279 cubic feet of sawn timber and 560,000 feet of lumber for Havana and other Cuban ports. The total shipments of lumber since September 1 aggregate 21,058,582 feet, against 27,170,350 feet for the corresponding period last year. The lumber market is in good shape, with an active demand from interior markets, and prices for certain grades of kiln-dried lumber are firm and slightly higher. There is a fair trade with Cuban ports, and some demand from Central and South America. At Pensacola the market is active, and for the month of November a good volume of business was reported. Over 15,000,000 feet of timber and lumber left the port during the month, and the outlook for the present month is very encouraging. The Sawn Timber Manufacturers' Association was organized last week. The purpose of this organization is to curtail the output of timber, and thus not only benefit the manufacturers, but protect to a very great degree the forests, which have been recklessly thinned out of valuable timber. The president of the association is T. R. Miller of the Cedar Creek Mill Co. of Brewton, Ala., and E. L. Moore of the Horseshoe Lumber Co. of River Falls, Ala., vice-president. The week's charters reported were as follows: The French steamer Cayrano, 1455 tons, from Pensacola to Gibraltar with timber at 82/6, option two ports of the Mediterranean, 85/, prompt; schooner T. W. Dunn from Apalachicola to Boston with lumber on private terms, and schooner C. E. Look, 457 tons, from Pascagoula to New York with lumber at $6.50.

Beaumont.

[From our own Correspondent.]
Beaumont, Texas, December 7.

There is no fault to be found at this time with the lumber trade of Texas and Louisiana long-leaf mills, either as to volume or values, but there is a great deal of trouble experienced in getting cars. At almost every one of ten or fifteen mills visited this week it was found that the shipments had been decreased for the month of November from 20 to 60 per cent. on account of lack of cars. The bulk of the business at this time is originating with the Texas dealers, whose requirements are heavy, and also in the Oklahoma Territory. In the latter section the new towns are taking a great deal of lumber, as can be easily imagined when in some of them there are as many as seventeen yards, and the town not six months old. The farmers of Texas have turned a good deal of cotton loose on the last rise in the market, and, as usual, the dealer has not been prepared to meet the sudden demand for lumber, with the result that the mills have received a good many rush orders for stock. Few yards have a normal amount of lumber on hand. The mill stocks are in about the same condition as a month since. The shortage of cars is most acute in the line of higher grade stuff, such as flooring, siding and ceiling. The grades of A and B are very hard to procure, particularly for prompt shipment. There are more orders on the mill books for ties than can be cut in four months. The Central Coal & Coke Co. has just closed a deal with the Fort Smith & Western Railway for 520,000 ties, or, say, 17,000,000 feet of lumber. The Mexican National Railway Co. has bought about 400,000 ties of different grades. There are specifications out, in addition to this, that will run up to 200,000 ties more. One of these orders was closed at $13 for hearts, one at $12 and one at $10 for square edge and sound, all f. o. b. the mills. The price of $13 for heart ties is the highest price ever paid for a standard heart tie. In addition to this, there is a very brisk call for guard rails, stringers, caps, crossing plank and other saw stock. The Chicago market is still an active buyer in this locality. Lumber in Texas is firm at $14.50 to $15 on common-point rate; flooring at $20 to $21; boxing, $18.50 to $19.

Lumber Notes.

The Enfield Lumber Co., which has been operating in Whaleyville, N. C., has removed its plant to Greenville, N. C.

The Forest Lumber Co. of Jefferson county has amended its charter by increasing its capital stock from $10,000 to $20,000.

The new saw-mill plant of the Magnolia Lumber Co. at Magnolia, Ark., is about completed, and will be put in operation by the 15th inst.

The Lord & Watson Lumber Co. of New Jersey has bought twenty acres of land near Chase City, Va., and will place thereon its mills and machinery.

The Elizabeth City Manufacturing Co. of Elizabeth City, N. C., has doubled its capital stock and ordered a complete outfit of modern planing-mill machinery.

The Savannah Box and Basket Factory at Savannah, Ga., was completely de-

stroyed by fire on the 7th inst. The total loss approximates $8000 or $10,000.

The Southern Lumber Co. of Warren, Ark., has selected a site for its projected saw-mill plant. This will be one of the largest lumber plants in South Arkansas.

The Central Lumber Co. of Meridian, Miss, has been chartered, with a capital stock of $5000. The incorporators are W. D. Schride, E. A. Spinks, W. E. Drew and A. E. McGee.

The planing mill, dry-kiln containing 40,000 feet of lumber and several buildings, owned by W. J. Whitehurst of Richmond, Va., were destroyed by fire last week, entailing a loss of about $30,000; fully insured.

The shipments of lumber last week from Mobile aggregated 606,504 feet, and for the season 21,058,582 feet, against 27,170,550 feet last year. The shipments of sawn timber for the week were 189,563 cubic feet, and of hewn timber 9520 cubic feet.

The recent opening of the Oklahoma Territory for settlement near El Reno and Lawton has caused great activity among the lumber dealers of Little Rock and vicinity. Shipments during the past three months have been very heavy, and still the demand continues unabated.

Petersburg (Va.) Rim & Veneer Co. is extending its barrel and keg heading plant, and states that when the improvements are completed it will have the largest heading factory in the country. Considerable new machinery for woodworking and for power purposes is being installed.

It is stated that a Northern syndicate has purchased large tracts of timber in the swamps of the Pee Dee river in South Carolina, and is now establishing a saw-mill plant at Hunt's Bluff. A railroad is being built from Mandeville to the mill, and the company expects to cut timber on a large scale for the Northern markets.

The following wood products were shipped from Pensacola, Fla., during the month of November: Timber and lumber, 14,418,000 superficial feet; cottonwood lumber, 42,000 feet; poplar lumber, 65,000 feet; creosoted lumber, 58,032 feet; oak timber, 11,000 feet; telegraph poles and crossarms, 2475, and oak staves, 102,309.

The Lutcher & Moore Lumber Co. of Orange, Texas, has purchased the big saw-mill plant, stock of lumber, mill site, river frontage, timber booms, timber on hand and timber contracts of the L. Miller Lumber & Shingle Co. The Lutcher & Moore Lumber Co. will assume charge of the property on the 1st of January, and will operate it in connection with its big plant.

The Warnell Lumber & Veneer Co. of Plant City, Fla., has already furnished this season over 150,000 orange boxes, and is unable to supply the demand. The company has bought the saw-mill at Lockhart, on the Seaboard Air Line, near Orlando, and will erect a duplicate of its Plant City factory at that place. The plant will be ready to commence operations by January 15.

It is stated that all of the Minneapolis lumber mills have closed down for the season, the ice forming in the river rendering it impossible for them to continue operations. The season has been a long one, the first mill starting up this year April 1, and the last one closing down about November 16, and the cut for 1901 will stand second in the history of lumber manufacturing in Minneapolis.

The saw-mill of the Queen & Crescent Lumber Co. at Nicholson, Miss., which was almost totally destroyed by fire recently, has been rebuilt, and everything is in working order. The mill will have a capacity of 100,000 feet of lumber a day, and the planing mill will turn out 80,000 feet a day. The company has increased its timber holdings 25,000 acres, and will commence operations on January 1, 1902.

A company has been organized to build a shingle mill at Plaquemine, La., with a capital stock of $60,000. The company is also arranging to erect a large cooperage plant at either Plaquemine or Morgan City. The company controls 130,000 acres of timber land and the Plaquemine interests of 20,000 acres. The officers of the company are Dr. S. P. Schwing of Plaquemine, president; J. M. Dresser of the firm of Dresser & Metzger of New Orleans, vice-president, and E. B. Schwing of Plaquemine, secretary and treasurer.

The charter officers of the Kirby Lumber Co. of Houston, Texas, have been announced, and are as follows: John H. Kirby, president; James L. Kirby, treasurer; W. Y. Fuqua, secretary and auditor. The directors are John H. Kirby, James L. Kirby, W. W. Willson, Marcellus E. Foster, B. F. Bonner, F. A. Reichart, H. B. Rice and S. B. Cooper, Jr. The active offices are W. W. Wilson, purchasing agent; F. M. Aldridge, manager logging department; George R. Wasbrough, traffic manager, and Emmett Fletcher, manager of mills at Beaumont.

The preliminary census report from Washington, D. C., on the saw-mills, planing mills operated in connection with saw-mills and timber camps of the United States shows the following figures for 1900, and the increase during the previous ten years: Establishments 33,035, increase 46 per cent.; capital $611,010,412, increase 9 per cent.; average number of wage-earners 283,510, decrease 9 per cent.; total wages $104,633,091; increase 19 per cent.; miscellaneous expenses $17,719,239, decrease 26 per cent.; cost of materials $317,607,048, increase 31 per cent.; value of products $566,832,984, increase 9 per cent.

The Sawn Timber Manufacturers' Association, comprising 75 per cent. of the principal timber manufacturers of Alabama and Florida, was permanently organized last week at Pensacola, Fla. The prime object of the organization is to curtail the output of the mills in the sawn-timber line. The lumber business is not in any way connected with the association. It is the intention of the association to so curtail the output of the mills that the manufacturers will be completely in control of the timber market, and can reduce or swell the output at will. It is also intended to have the business so well in hand that the dealers on the other side of the water can be compelled to come to the terms of the manufacturers, and not the manufacturers to the terms of the Englishmen, as has been the case heretofore. When the output is curtailed the price will rise, and this is what the manufacturers desire. The officers of the association are T. R. Miller of Brewton, president, and E. L. Moore of River Falls, Ala., vice-president.

Cottonseed treated by a special process is now being exported by way of New Orleans, and since the beginning of the season over 1000 tons have been shipped to Belgium and Liverpool to be converted into oil and cake. The seed is delinted by a new process, and has been shipped principally from the territory in the vicinity of Vicksburg, Miss.

Shipments of cattle from Galveston are to be resumed upon the arrival there of the Gulf Transport liner Ikbal, which has 300 head engaged for her return trip.

During one week recently 500,000 bushels of wheat were sent into Mexico from Texas and other States.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., December 11.

The local market for phosphate rock continues quiet, with values steady and holders not disposed to make concessions. Fertilizer men are buying more freely, and from out of town several good orders have been recorded during the week. The following charters were reported during the past week: German steamer Hispania, 1378 tons, from Tampa to Stettin with phosphate at about 12/, February; Norwegian ship Vildanden, 1489 tons, from Tampa to Melbourne with phosphate at 23/; schooner Anna L. Mulford, 518 tons, from Charleston to New York with phosphate on private terms; schooner Charles L. Mitchell, 500 tons, from Cartaret to Martinique with fertilizer at $2.50; Italian steamer Agnello Ciampa, 2771 tons, from Sicily to New York with 3000 tons of sulphur at 7/6, and British steamer Jerseymoor, 2408 tons, from west coast South America to New York with nitrate at 25/, option Galveston at 26/, December. Recent advices from mining sections in the South continue favorable, the movement in Tennessee being especially active. In the Mt. Pleasant section the rock above ground has been practically worked off, and sales for 1902 delivery, which are reported heavy, will have to be satisfied by rock yet to be mined. The outlook for the coming year is very encouraging, and both for domestic and export rock there is a very healthy demand, with prices firm and hardening. Florida rock continues to maintain its popularity both at home and abroad, and for pebble and hard rock the demand is good, while prices are improving. Shipments reported from Florida ports have so far this month been very satisfactory. The outlook in South Carolina is favorable for a good winter's work among miners on the Coosaw and Ashley rivers, and the domestic demand for desirable cargoes of rock continues of a favorable character. The foreign inquiry is slightly improved.

Fertilizer Ingredients.

The market for ammoniates has ruled fairly active during the week, with values firm. Holders are not anxious sellers, as the situation is regarded with considerable confidence. Dried blood and tankage are selling in moderate lots at outside figures. Sulphate of ammonia is firm for spot or nearby shipment. Nitrate of soda may be written firm for all spot parcels.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)....	$2 77½@ 2 80
Nitrate of soda, spot Balto....	1 90 @ 1 92½
Blood	2 27½@ 2 30
Azotine (beef).....	2 30 @ —
Azotine (pork).....	2 30 @ —
Tankage (concentrated).....	2 17½@ 2 20
Tankage (9 and 20).....	2 25 & 10@ 2 30 & 10
Tankage (7 and 30).....	20 00 @20 50
Fish (dry).....	26 00 @27 00

Phosphate and Fertilizer Notes.

Shipments of Tennessee phosphate rock from Pensacola, Fla., for the month of November amounted to 7512 tons.

The schooner Susie H. Davidson cleared last week from Charleston, S. C., for Baltimore with 850 tons of phosphate rock.

The steamship Hughenden cleared from Savannah, Ga., last week for Bremen with 1367 tons of high-grade Florida phosphate rock among her cargo.

The Federal Chemical Co., capitalized at $3,000,000, was chartered at Nashville, Tenn., last week. This company intends operating in the Mt. Pleasant district.

Messrs. J. M. Lang & Co. of Savannah, Ga., report the shipments of high-grade Florida phosphate rock from that port for the month of November at 17,498 tons; amount previously reported 134,910 tons, making the total shipments for eleven months ending November 30, 1901, 152,408 tons.

The Spanish steamer Ernesto was cleared last week from Pensacola by the Gulf Transit Co. for Liverpool with 344 tons of Tennessee phosphate rock among her cargo.

The British steamship Forestdale arrived last week at Portsmouth, Va., with 5000 tons of kainit. About half the cargo goes to the Old Dominion Guano Co., and the balance to Charleston, S. C.

It is stated that William K. Pelzer and others have incorporated the Alabama Fertilizer Co. of Montgomery, Ala., for the purpose of operating a fertilizer-manufacturing plant. The capital stock of the company is $50,000. The incorporators are William K. Pelzer, Arthur Pelzer, Edmond R. Taber and William A. Gayle, all of Montgomery.

The sales of fertilizer tags in North Carolina for the present year are greatly in excess of 1900, and the income from this source is correspondingly greater. In 1900 the sales were 276,238½ tons, at twenty cents, producing a revenue of $55,247.69, while the sales of 1901 amount to 339,941 tons, producing a revenue of $67,988.24, showing an increase in sales for 1901 over 1900 or $12,740.55.

The World's Work for December sweeps an even wider range of topics than ever, and it is well written, with a swing and movement that vivifies the workaday activities of the month. Particularly striking because of its author and his recognized interest in the subject is President Roosevelt's article concerning Mr. A. G. Wallihan's remarkable camera shots at wild animals, illustrated by some of Mr. Wallihan's best pictures. Julian Ralph's outline of the results of the Boer war to date contains much that is new about the conditions now existing in South Africa. Greater New York is being rebuilt, and M. G. Cunniff and Arthur Goodrich, in a splendidly-illustrated article, tell how the new city "built of steel and founded on a rock" is replacing the old. By the recent election, also, New York has been politically remade, and Lindsay Denison sketches a number of stirring scenes from the recent unique municipal campaign. Frederic Emory writes of the greater America, showing how the backbone of American expansion is in the character of the people. There is a timely character sketch of Li Hung Chang, and another, by William Justus Boies, of George W. Perkins and his early business success gained by human touch.

Like the November number, the Christmas issue of Leslie's Popular Monthly is beautifully decorated with color-plate illustrations, and the general appearance of the magazine is notable among the monthlies. The opening article, written by the famous showman, Frank C. Bostock, is illustrated by a score of sketches and finished portraits of living animals drawn from life by Charles C. Bull. Another paper of importance is contributed by Gen. Ballington Booth, and entitled "The Personal Appeal of the Volunteers." As for stories, the number is full of them—one a delightful story by the author of "Your Uncle Lew," another by the rising novelist, William McLeod Raine, a third by Onoto Watana, a fourth by Sewell Ford, and still another by Cy Warman, and others yet. The ingenuous diary of a Japanese girl is continued in this number, while Maurice Hewlett's novel continues its delightful course. In Marginalia, Gelett Burgess appears at the head of a band of humorists.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Bessemer—Electric-power Plant.—Birmingham (Ala.) Railway, Light & Power Co., reported lately as having contract for lighting city of Bessemer and to build a power-house of 1000 horse-power capacity, has purchased the electric-lighting plant of the Bessemer Electrical Co. for $24,000, and will expend $30,000 in enlargements and improvements.

Birmingham—Water-works Improvement. Birmingham Water-Works Co. will make extensive improvements at a cost of about $15,000.

Birmingham—Oil Refinery, etc.—John T. Stokes and T. W. Kirkpatrick of Atlanta, Ga.; E. S. Brazelton of Ensley, Ala., and William Hood of Birmingham have incorporated American Lubricating Manufacturing Co., with capital stock of $40,000, for erecting a plant to manufacture lubricating greases and refining oil, etc.

Birmingham—Coal Mines.—Lehigh Coal Co., with capital stock of $50,000, has been incorporated by Priestly Toulmin, president, and E. F. Quinn, secretary, for developing 2000 acres of coal lands in Blount county; company expects to produce 10,000 tons of coal per month.

Birmingham—Coal and Coke Company.—Chartered: North Alabama Coal & Coke Co., with capital stock of $100,000.

Demopolis — Cotton Mill. — Bessie Minge Manufacturing Co. has been organized, with capital stock of $100,000, to build cotton mill, with J. H. Minge, president; W. C. Harrison, vice-president, and J. C. Minge, secretary.

Huntsville—Electric-light Plant.—City council has named committee to investigate cost of building electric-light plant to be operated in connection with the municipal water-works; J. Robert Jones, chairman of committee.*

Huntsville—Spoke Factory.—Joseph Mitchener and W. E. Henderson have arranged to establish a $150,000 spoke factory, to employ 200 men.

Mobile—Machine Shops, etc.—Mobile, Jackson & Kansas City Railroad has awarded contracts to E. E. Ward for erection of its machine shops, and to Merrill & Suck for its proposed coal hoist and tipple, which improvements have been mentioned recently.

Montgomery—Fertilizer Factory.—William K. Pelzer, Arthur Pelzer, Edmund R. Taber and William A. Gayle have incorporated Alabama Fertilizer Co., with capital stock of $50,000, for increasing capacity of its plant and adding chamber space.

Sheffield—Machine Shops.—The shops previously reported to be established at Sheffield by the Southern Railway will be operated entirely by electricity; buildings will also be lighted by electricity; Frank S. Gannon, general manager, Washington, D. C.

Talladega—Cotton Gin.—Wallace & Co. will rebuild their cotton gin, lately reported burned.

Wylam—Pharmacy.—Wylam Pharmacy Co. has been incorporated, with capital of $2100, by Joseph Martin of Wylam, Robert Neill of Dolomite and others.

ARKANSAS.

Devall Bluff.—Chartered: White River Mercantile Co., with capital of $50,000, by R. A. Roberson, president and treasurer; F. T. Page, vice-president, and I. E. Roberson, secretary.

Harrison—Sewerage System and Water-works.—Arrangements for construction of city's proposed $20,000 water-works and $7500 sewerage have been completed. Address J. E. Andrews.

Little Rock — Granite Works. — Twencen Granite Works has been incorporated, with capital stock of $300,000, by Albert H. Lea, president; R. H. Sansom, vice-president; Walter D. Braddock, secretary, and Robert E. Wait, treasurer.

Little Rock—Mercantile.—Chartered: Stone Bros. & Co., with capital of $5000, by W. H. Stone, Jr., and others.

Paragould — Townsite Company. — Chartered: Midway Townsite Co., with W. F. C. Hasty, president; A. Bertig, vice-president; J. M. Love, secretary and treasurer.

Prairie—Mercantile.—Chartered: Gwaltney Mercantile Co., with capital stock of $10,000, by N. W. Gwaltney and others.

Warren—Stave Mill.—Warren Stave Co., with capital stock of $16,000, by J. A. Adams, president; S. B. Meek, vice-president, and B. F. Gardner, secretary and treasurer.

FLORIDA.

Live Oak — Cotton Ginnery. — Chartered: Suwanee Ginning Co., capitalized at $7000, by Henry A. Blackshear, John J. Slater, Howard Harris and Charles G. Bell.

Orlando—Box and Crate Factory.—Warnell Lumber & Veneer Co. of Plant City, Fla., has purchased mill near Orlando, and will establish a duplicate of its Plant City factory at that point.

Quincy—Tobacco Company.—Emil Wedeles, Joseph Wedeles and Max Wedeles have incorporated Wedeles Tobacco Co. for planting and cultivating tobacco and for mercantile business; capital stock is $100,000.

Sumter County—Oil Wells.—John W. Pearson of Ocala, Fla., and others are interested in the development of oil lands in Sumter county.

Tampa — Mercantile. — Chartered: Davis Mercantile Co. has been incorporated, with capital of $5000, by E. B. Davis and others.

GEORGIA.

Atlanta—Asbestos Deposits.—Asbestos deposits have been discovered on the property of Lieut. Wilmer O. Chrisman near Atlanta, as recently reported, and may be developed. Address care Hotel Alhambra.

Cartersville—Mercantile.—Chartered: Traders' Exchange Co., with capital of $1000, to conduct general mercantile and real-estate business, by Harry Wikle.

Cedartown—Bulk Oil Station.—Standard Oil Co. (New York) will erect a large bulk station at Cedartown; enlarged plant will include three stationary tanks, one for illuminating oil with capacity for 15,000 gallons, and the other two with capacity for holding 6000 gallons each; J. E. Good, local representative.

Gainesville—Flour and Corn Mill.—Company has organized, with capital of $10,000, for establishing flour mill with capacity of 100 barrels and corn mill of 500 bushels capacity; power for operating mill will be supplied by Gainesville Electric Light & Power Co. Geo. C. Chambers of Augusta, Ga., is interested.

Hawkinsville — Telephone System.—James O. Persons of Greenville, S. C., is interested in the Hawkinsville & Cochran Telephone Co., which will make improvements at Hawkinsville and Cochran, Ga.; company also contemplates building long-distance line to Eastman.

Mineral Bluff—Gold Mine.—A company will be organized to develop the Garret gold mine in Fannin county. C. C. Baugh may be addressed.

Savannah—Box and Tub Factory.—Pierpont Manufacturing Co. will erect additional building in which to install machinery for manufacturing crates, boxes and tubs.

KENTUCKY.

Covington—Electric-light Plant.—City is considering municipal ownership of the electric plant. Address "The Mayor."

Danville—Oil Wells.—Wayne Gas & Oil Co., with capital of $4000, has been chartered by J. W. Lockridge, president; Geo. D. Weatherford, secretary and treasurer.

Hawesville—Cannery.—H. A. Clark of McMinnville, Tenn., will establish a cannery at Hawesville.*

Louisville—Tailoring.—Kahn Bros. (wholesale tailors) will incorporate, with capital stock of $15,000; E. M. Kahn, secretary and treasurer.

Louisville—Real Estate.—Weissinger-Gaulbert Real Estate Co. has been incorporated, with capital of $1200 and Harry Weissinger, president.

Louisville—Shirt Factory.—J. M. Robinson, Norton & Co. will incorporate as recently reported; company contemplates enlarging its shirt factory.*

Louisville—Oil Wells.—Kentucky Consumers' Oil Co. has been incorporated, with capital of $15,000, by John McNab, E. Kimble and R. L. Kelly.

Nicholasville—Lumber Mill.—G. A. Roy and J. B. Arnett will incorporate Roy Lumber Co. (established), with capital increased from $17,000 to $20,000.

Owensboro—Bolt Works.—A. J. Daniels is investigating the establishment of a bolt works for parties who have such an enterprise in contemplation.*

Valley View—Distillery.—M. B. Ferron of the Southern Lumber Co. has new process for making wood alcohol, and will probably establish a plant.

LOUISIANA.

Diamond—Paper Mill.—Ex-Governor T. A. Warmoth will erect a plant for the manufacture of cane bagasse into paper at a cost of $100,000 as an adjunct to his central sugar factory.

Jennings—Electric Plant, Water-works, etc. City will probably vote on issuance of bonds for erection of electric plant, construction of water-works, sewerage system, etc. Address "The Mayor."

Jennings—Oil Refinery.—New York and New Orleans (La.) parties have organized a $500,000 stock company for erection of an oil refinery at Jennings with capacity of 2000 barrels. Site of seventy-two acres is said to have been purchased.

Lake Charles—Irrigation Improvements.—J. B. Watkins proposes to drain 25,000 acres of land in order to provide irrigation and open the lands to rice cultivation.

Lake Charles—Oil Wells.—Majestic Oil & Pipe Line Co. has been incorporated, with capital stock of $2,000,000, for development of oil, gas and mineral lands. Wm. H. Winants is president; James R. Burton, first vice-president; Chas. M. Sheldon, secretary, and John R. Mulvane, treasurer.

New Orleans — Commission Company. — Philip Nagele, Edward Nagele and others have incorporated Philip Nagele Co., Limited, to conduct commission business; capital $5000.

New Orleans—Water Supply.—Plans have been submitted by Superintendent Geo. G. Earl for furnishing a new water supply of 40,000,000 gallons a day at a cost of $1,500,000.

Rayville—Ice Plant.—Charles Titche contemplates erecting the ice plant lately mentioned; proposed capacity, fifteen to twenty tons.

Thibodaux—Moss Ginnery Works, etc.—Thibodaux Moss Manufacturing Co. has been incorporated, and is erecting building which will be equipped with moss gins and machines for making moss collars, mattresses, cushions, etc.

MARYLAND.

Annapolis—Oil Wells.—Louis Fritz, Joseph Kock of Kentucky, Luther A. Palmer, James A. Walton, James W. Owens of Annapolis and others have incorporated Eastern Investment & Mining Co., with capital stock of $25,000, for development of oil wells in Anne Arundel county.

Baltimore—Oil and Paint Company.—Baltimore Lubricating Oil & Fireproof Paint Co. has been incorporated under Delaware laws, with capital stock of $100,000.

Baltimore — Gas-mantel Company.— Hartford Mantel & Supply Co. has been incorporated, with capital stock of $25,000, to manufacture incandescent gas mantels and to deal in gas-lamp supplies. William Kleinle is president; Benj. W. Hartford, manager; Harry E. Gilbert, treasurer, and Thos. R. Whitehead, secretary.

Baltimore—Workshop.—John Stack & Son have contract at $41,700 for erection at Maryland penitentiary of a four-story and basement granite workshop 100x50 feet; plans by Hugh Magruder.

Baltimore—Land Company.—International Land Co. has been incorporated, with proposed capital of $500,000, by Geo. S. McCullough, John J. Carroll, Frank D. Stevenson, Edward S. Hammill and others.

Baltimore—Specialty Company.—Baltimore Specialty Co. has been incorporated, with capital stock of $100,000, to manufacture toys of all kinds.

Baltimore — Land Improvement. — Caves Valley Farm Co. has been incorporated, with capital stock of $100,000, to develop property in Baltimore county. Andrew D. Jones, Edwin Warfield and James H. Preston, Jr., are incorporators.

Baltimore—Locomotive Sander Company.—Economy Locomotive Sander Co., capitalized at $300,000, has been chartered at Dover, Del. Names of incorporators not announced yet.

Baltimore—Furniture Factory and Warehouses.—Bagby Furniture Co. has purchased site at $12,500, and will erect new factory building and three warehouses three stories in height.

Baltimore—Gas Plant.—Consolidated Gas Co. will build two additional gasholders at a cost of $125,000.

Belair—Flintstone Quarries.—Edward M. Allen, Jr., D. Gilpin Wilson, Noble L. Mitchell, Geo. L. Van Bibber and Chas. F. Harry have incorporated Harford County Flint Co., with capital of $50,000, for developing flintstone quarries, etc.

Frederick — Lighting Plant. — City will change location of its electric-light plant and install additional machinery for doubling capacity. Address "The Mayor."

Pocomoke City—Oil Wells.—Pocomoke City Oil Co. has been organized, with capital stock of $25,000, to prospect for oil between Pocomoke City and New Church, by F. B. Hendricks, E. James Tull, Elijah J. Schoolfield and others.

Westminster—Abattoir, Ice and Cold-storage Plants.—Westminster Abattoir Co., with capital stock of $50,000, has been incorporated for conducting general abattoir and erecting ice and cold-storage plants, by Chas. Hesson, John R. Martin, Harvey J. Hull and others.

MISSISSIPPI.

Bexley — Planing Mills, etc. — Diamond Lumber Co., lately reported incorporated, will soon have completed planing mill and dry-kilns, which will add to and enlarge its lumber-manufacturing plant.

Clarksdale—Oil Mill.—Planters' Oil Works has been organized, with capital stock of $75,000, as recently reported, and will erect an 80-ton cottonseed-oil mill; Chas. L. Wortham, general manager.

Columbia.—Chartered: Lampton Company, with capital stock of $100,000.

Ellisville—Ice and Cold-storage Company.—Ellisville Ice & Cold Storage Co. has been incorporated, with capital stock of $10,000, by W. P. Craft, John H. Cook, W. V. Waters and others.

Fayette—Water-works.—P. H. Porter of Louisville, Ky., has received contract at $12,250 for constructing the water-works at Fayette, previously reported.

Greenwood—Light and Power Company.—Greenwood Light & Power Co., with capital stock of $80,000, and privilege of increasing to $250,000, by C. E. Wright, S. R. Keesler, R. H. Barrett and R. L. Sims.

Grenada—Mercantile.—Chartered: Grenada

Mercantile Co., with capital stock of $20,000, by J. M. Windham and others.

Jackson — Confectionery Company.—Chartered: Martz Confectionery Co., with capital of $5000, by R. L. Jones and others.

McHenry—Syrup Factory.—W. G. T. Carver, industrial agent for the Gulf & Ship Island Railroad, is endeavoring to establish a syrup factory.

Meridian—Lumber Company.—Chartered: Central Lumber Co., with capital stock of $5000, by W. D. McBride, E. A. Spinks, W. E. Drew and A. E. McGee.

Meridian — Filtration Plant. — Plans and specifications for filtration plant for works of American Water-Works Co. have been completed.

Meridian—Publishing.—Chartered: Meridian Press Co., with capital stock of $30,000, by Frank V. Evans, H. M. Threefoot and others.

Nicholson—Lumber Mills.—Queen & Crescent Lumber Co. will rebuild its mill lately reported burned; capacity for sawing will be 100,000 feet per day and for planing 80,000 feet.

Poplarville—Lumber Mill.—W. W. Lambert & Co. have bought machinery to replace the equipment destroyed by fire in its mill recently.*

Vicksburg—Oil Tanks.—J. M. Guffey Petroleum Co. of Beaumont, Texas, has, it is reported, purchased site at Vicksburg, and will build two steel tanks of 20,000 barrels capacity each.

MISSOURI.

Carthage—Water-works.—Burns & McDonnell, Postal Telegraph Building, Kansas City, Mo., have submitted plans and estimates for water-works for Carthage.

Carthage—Lead and Zinc Mines.—Monongahela Mining Co., with capital of $5000, has been incorporated by H. A. Walcott, H. L. Baird, R. A. Ralph and others.

El Dorado Springs—Water-works.—It is said that Burns & McDonnell, Postal Telegraph Building, Kansas City, have completed plans for the water-works and sewerage system previously reported as proposed for El Dorado Springs.

Hannibal—Lumber Company.—North Missouri Lumber Co. has been incorporated, with capital stock of $75,000, by W. B. Pettibone, J. W. Mounce and J. W. Nicely.

Joplin — Mining. — Chartered: Greenwood Mining Co., with capital stock of $40,000, by S. H. Hale, R. P. Bobbins, Byron Brown and others.

Kansas City — Mercantile. — Chartered: Dickey Mercantile Co., with capital stock of $50,000, by J. H. Dickey and others.

Kansas City — Development. — Chartered: Southwestern Development Co., with capital stock of $100,000, by B. D. Hurd, J. H. Drown and C. W. Lucas.

Kansas City—Hat Company.—Chartered: Turner & Jay Hat Co., with capital stock of $75,000, by F. H. Turner, D. M. Jay, E. A. King and others.

Kansas City—Oil-marketing Company.—Fuel Oil Marketing Co. of Kansas City and Beaumont, Texas, has been incorporated, with capital stock of $3,000,000, by W. C. Renfro of Oklahoma, president; J. J. Swofford of Kansas City, vice-president; W. A. Rule of Kansas City, treasurer, and A. S. Kimberly, secretary. Company controls output of some Beaumont gushers.

Kansas City—Printing.—R. M. Rigby Printing Co., with capital of $5000, by Harry D. Train, Lizzie Rigby and Robert Rigby.

Kansas City—Die and Mold Company.—Chartered: Kansas City Die & Mold Co., with capital of $6000, by Constance Bartholomees, George Magnien and Chas. F. Bartholomees.

Springfield—Ice Factory, etc.—Chartered: Queen City Ice & Refining Co., with capital stock of $40,000, by J. M. Yarbrough, W. J. Bradshaw, A. Dallen and others.

St. Joseph—Glove Company.—Chartered: Brown-Bouton Glove Co., with capital stock of $15,000, by M. M. Brown, B. S. Bouton and others.

St. Louis—Extraction Company.—Yosemite Extraction Co., with capital stock of $50,000, has been incorporated by W. E. Gill, Thomas Meng, S. T. G. Smith and others.

St. Louis—Construction.—Chartered: Midland Construction Co., with capital stock of $50,000, by A. N. Sager, F. O. Hadley and W. F. Carter.

St. Louis—Underwear Factory.—It is reported that C. R. Murrell of New York city and others will build an underwear factory.

Webster Groves—Water-works.—Geo. Burnett of the Missouri River, Light & Water Co. of St. Louis has made a proposition to furnish Webster Groves with water from Missouri river.

NORTH CAROLINA.

Asheville—Water-works.—City will hold election January 4 to vote on proposed issuance of $200,000 bonds for construction of new gravity system water-supply plant. Address "The Mayor."

Charlotte—Sizing Plant.—Carolina Sizing Co. has been incorporated, with capital of $10,000, for manufacturing sizing for cotton warps, by Alvis Steinhouser, N. J. Bakke and Henry L. Persson.

Claremont—Cotton Mill.—J. W. Setzer is endeavoring to organize company for the erection of a cotton mill.

Elizabeth City—Planing Mill.—Elizabeth City Manufacturing Co. has doubled its capital and will install equipment of planing-mill machinery.

Goldsboro—Hardware Company.—W. H. Smith, B. F. Aycock, J. B. Edgerton and others have incorporated Wayne Hardware Co., with capital stock of $100,000, to succeed Smith & Yelverton.

Henderson—Mercantile.—Rose's Mercantile Co., with capital of $10,000, has been incorporated by Geo. A. Rose, J. B. Owen and others.

Henderson—Bridge and Depot.—Seaboard Air Line Railway, John Skelton Williams, president, Richmond, Va., will construct steel overhead bridge and passenger depot at Henderson.

Hickory—Woolen Mill.—J. A. Martin, T. J. Lutz, J. L. Latta and J. R. Gaither have incorporated Catawba Wool Mills to manufacture woolen yarns and cloth.

Hickory—Knitting Mill.—A company is organizing to build knitting mill. Possibly J. A. Martin can inform.

Kernersville—Broom Factory.—Nelson & Winfree contemplate establishing a broom factory.*

Kinston — Cotton Mill. — Kinston Cotton Mills will issue $25,000 of preferred stock to pay for new machinery.

Mount Airy.—Chartered: Surry County Fruit & Grape Co., with capital stock of $10,000, by John C. Brittingham of Baltimore, Md., and others.

Mount Olive — Mercantile. — Chartered: Bostick & Coal Co., with capital of $8000, by B. J. Bostick and others.

New Berne—Electric-light Plant.—City has decided to issue the $15,000 of bonds for electric lights recently reported. Address "The Mayor."

Oxford — Buggy Factory.—Taylor-Canady Buggy Co. will double capacity of its plant.

Rutherfordton—Cotton Mill.—Levi Cotton Mill will increase capital from $100,000 to $200,000.

Wadesboro—Bakery.—J. T. Capel and John W. Gulledge will erect a bakery.

Washington — Water-works. — City has granted franchise to Steven S. Shurks of Pennsylvania for construction of system of water-works.

Williamston—Land Improvement, etc.—Williamston Land & Improvement Co., reported recently as incorporated, will conduct real-estate and land-improvement business, and possibly engage in the milling business; Alfred E. Whitmore, general manager.

Winston.—Piedmont Park Co. has increased capital from $5000 to $10,000.

SOUTH CAROLINA.

Abbeville—Flour Mill.—W. H. Long is erecting building, which he will equip as a 60-barrel flour mill, as recently reported; will also install machinery for grinding from 200 to 300 bushels cornmeal per day.

Bennettsville—Saw-mill.—Northern parties have purchased timber in swamps of Pee Dee river near Bennettsville, and are erecting saw-mill for developing.

Charleston—Catering.—Chartered: U. S. Catering Co., with capital of $1000, by C. T. Massey and others.

Conway—Saw-mill.—Burroughs & Collins Co. will erect saw-mill of 20,000 feet capacity.*

Darlington—Flour Mill.—T. C. Shores will rebuild flour mill, burned at a loss of $5000.

Florence—Warehouse Company.—Dixie Tobacco Warehouse Co. has been incorporated, with capital of $5000, to operate stemmery and warehouse, by W. D. Motte, W. F. Armfield and J. H. Cole.

Marion — Mercantile.— Chartered: Gasque Mercantile Co., with capital of $10,000, by E. H. Gasque and others.

Sumter—Cotton Gin.—Sumter Oil Mill will rebuild its cotton gin lately reported burned; will install four-gin outfit complete.*

Tucapau—Cotton Mill.—Tucapau Mills Co. is contemplating extensive enlargements to its plant; now has 28,000 spindles and 770 looms.

Young Island—Mercantile.—Chartered: The Gibson Co., with capital stock of $7000, by M. A. and C. M. Gibson.

TENNESSEE.

Beersheba Springs — Improvement Company.—Beersheba Improvement Co. has been incorporated, with capital of $5000, by R. W. Turner, G. P. Thurston, R. B. C. Howell and others.

Bristol—Handle Factory.—Company is being organized for the manufacture of handles, axe, pick, sledge hammers, etc., by C. F. Ohlemacher and others, as recently reported; capacity will be 100 dozen per day.*

Bristol—Foundry and Machine Shops.—Enterprise Machine Works (lately reported) has leased the machine shops and brass foundry which have been operated as a part of its plant, and is erecting boiler shop with the intention of adding to this plant machinery as may be needed and doing all kinds of machine and boiler work, including building of boilers, tanks, stacks and brass founding. Enterprise Foundry Co. and Enterprise Machine Works will be carried on at the same plant, but under separate management. Company will add in the spring a lathe, shaper for engine brasses and steam hammer for blacksmith shop.*

Chattanooga—Knitting Mill.—Mathis & Davis Co. will erect new building and add machinery to double its knitting mill's capacity; now has ninety machines.

Dayton—Electric-light Plant.—Dayton Coal & Iron Co. is reported as contemplating the construction of electric plant at its mines, and may furnish lighting supply to city.

Fayetteville—Publishing.— Janus Publishing Co. has been incorporated, with capital of $1500, by J. H. Thompson, F. C. Gill, H. M. Street and others.

Grassy Cove—Coal Mines.—Powell Lumber & Mining Co. is preparing to develop its 7000 acres of coal land.

Johnson City—Water-works.—Contract for supplying Soldiers' Home with water has been awarded to Johnson City Water Co., which will construct plant at once.

Jonesboro—Cotton Mill.—Jonesboro Yarn Mills (established) has incorporated, with capital of $25,000. A. P. Mathes is manager.

Lynnville—Carriage Factory and Machine Shop.—Regen Bros. will rebuild their machine shop and carriage factory recently burned.

McMinnville — Telephone Company.— Citizens' Telephone Co. has been organized by A. R. Hammer, M. L. Fletcher, R. M. Reams, A. H. Faulkner.

Memphis—Stave Mill.—George H. Glascock & Co. will establish large stave mill.

Murfreesboro—Ice Plant.—A. G. Tomkins will build ice and cold-storage plant.

Nashville—Mining.—Buckeye Mining Co., with capital stock of $100,000, has been incorporated by Chas. E. Longwell, Walter Pickens, John C. Newton of Toledo, Ohio; Henry T. Lee and H. Walter Doty of Findlay, Ohio.

Nashville.—Dixie Pure Food Co., reported lately as incorporated, is erecting a four-story building, which it will equip for manufacture of breakfast foods, food coffee, loaves, crackers and health foods generally; W. O. Palmer, president.

Nashville—Flour Mill.—B. F. Poorman of West Union, Ill., is investigating with a view to establishing a 100-barrel flour mill at Nashville.

Paris—Machine Shops.—Paris Manufacturing & Implement Co., reported recently as incorporated, will, in addition to enlarging its present business, conduct a jobbing business of machinery, farming implements, etc.

Pulaski—Water-power Development.—B. F. McGrew, who owns the Richland Mills and the Rainey Mills properties, has purchased the Elder property, and it is estimated that the three sites combined will be capable of furnishing from 600 to 1000 horse-power, which will probably be developed electrically for furnishing light and power.

Rockwood—Electric Plant.—City has voted issuance of $6000 of bonds for completing its electric plant, as recently reported, and for additions to water plant; C. F. Steinwehr, recorder.

Rockwood—Iron and Coke Manufacturing, etc.—It is stated that Roane Iron Co. will expend more than $500,000 for improving and extending its iron and coke-manufacturing operations next year. Company has purchased recently extensive iron-ore lands amounting to $55,000.

Rogersville—Stave Mill.—Samuel Vaughn of Van Hill, Tenn., will establish a stave mill at Rogersville.

Sherman Heights—Singletree Factory.—W. H. Lockwood, William Herron and H. P. De Rochment will establish a singletree factory, which for the present will be operated in connection with Sherman Heights Tannery; will erect new building, of wood, 150x50 feet.

Winchester—Oil and Gas Lands.—J. A. McCord, W. J. Campbell, J. W. English, Sr., E. H. Thornton and others have incorporated Winchester Oil & Gas Co. for development of oil and gas properties.

TEXAS.

Beaumont—Mercantile.—Chartered: Heisig & Norvell, with capital stock of $150,000, by Lip Norvell and others.

Beaumont — Lumber Company. — Forest Lumber Co. has increased capital from $10,000 to $20,000.

Beaumont—Mercantile.—Chartered: Heisig & Norvell, with capital stock of $150,000, by P. A. Heisig and others.

Beaumont—Oil Wells, etc.—Chartered: New York & Beaumont Oil & Transportation Co., with capital stock of $1,000,000, to produce oil, build and operate pipe lines, etc., by Peter D. Martin, John Josten, both of New York city; C. L. Hanson, F. D. Minor and R. C. Duff of Beaumont.

Beaumont—Oil Wells.—Gold Eagle Oil Co., with capital stock of $300,000, by F. D. Smith of El Paso, R. A. Josey, D. A. Duncan, R. C. Duff and others.

Beaumont—Oil Wells.—L. C. Parker of Hot Springs, W. R. Felker, Rogers, Ark.; W. B. Skirvin, R. W. Roland of Galveston and others have incorporated United States Oil & Transportation Co., with capital stock of $500,000.

Beaumont—Oil Wells.—Arkadelphia Oil Co. has been incorporated, with capital stock of $200,000 and branch office at Arkadelphia, Ark., by S. R. McNutt, L. C. Newberry, W. E. Barkman and others, to prospect for oil and minerals.

Brenham—Cotton Mill.—Committee has reported on its investigation as to erection of cotton mill, and suggests a $150,000 company to operate 5000 spindles and 150 looms. D. C. Giddings, Jr., can be addressed.

Brownsville—Irrigation System.—Brownsville Land & Irrigation Co., previously reported incorporated, has commenced construction of proposed canal, twelve miles in length, six feet deep and 120 feet wide, with capacity for irrigating 10,000 acres; cost of construction $80,000.

Dallas—Brewery.—Lone Star Brewing Co. has been granted new charter, with capital stock of $200,000; directors include Frank Arnold, F. W. Cook, Jr., William Aubrey and others.

Dallas—Oil and Fuel Company.—Dallas Oil & Fuel Co. has increased capital from $10,000 to $20,000.

El Paso—Grain Elevator.—It is reported that the Santa Fe road and Rock Island & Peoria Railroad will build jointly a 250,000-bushel grain elevator at El Paso; R. R. Cable, president Rock Island Company, Chicago, Ill.

El Paso—Water-works.—Engineer Le Daux, representing Squire Bros. of Philadelphia, Pa., who have franchise for water system at El Paso, has completed his examination, which, it is understood, is favorable.

Galveston—Oil Wells.—Horseshoe Oil Co. has been incorporated, with capital stock of $250,000, by B. C. F. Leonard, Leon Blum and Ed. McCarty.

Galveston—Turkish Baths.—W. H. Tyndall proposes organizing company to build Turkish-bath establishment at a cost of $5000.

Goliad—Cotton-machine Works.—P. P. Haring, R. L. Lemaster, Clark Denton and others have incorporated Haring Cotton Machine Co., with capital of $15,000, for manufacture of patent cotton-picking machine.

Graham—Telephone Company.—Northwest Texas Telephone Co. has been incorporated, with capital of $5000, by R. G. Graham, J. H. Ball and W. L. Donnell.

Houston — Chair Factory. — Auto-Safety Seating Co., John A. Wilkinson of New York, president, will establish a plant for manufacturing theater chairs in Houston.

Houston — Irrigation System. — Brazoria Rice & Irrigation Co., recently reported incorporated with capital stock of $400,000, will construct a system to irrigate 100,000 acres; Andrew Dow, general manager.

Houston — Warehouse, etc. — Chartered: Magnolia Warehouse & Storage Co., with capital of $100,000, by G. W. Neville, T. D. Warley, A. P. Weld and others.

Houston—Electric-light and Power Plant.—G. C. Hollister of Schenectady, N. Y., has purchased for $240,000 plant of Citizens' Electric Light & Power Co., and Houston Light &

Power Co. has been incorporated, with capital stock of $750,000, by Blake Dupree, W. H. Chapman of Houston, Edward Clark, H. M. Francis, E. L. Carr and others of Schenectady, N. Y.

Nacogdoches—Telephone Company.—Chartered: Central Texas Telephone Co., with capital stock of $10,000, for construction of telephone system, by E. C. Branch, W. S. Beeson and W. S. Patton.

Nacogdoches—Crate and Box Factory.—Work has commenced on erction of a $5000 crate and box factory. Names of interested parties will be announced later.

Palestine—Coal Mining.—Palestine Coal & Mining Co. has increased capital from $20,000 to $40,000.

Round Rock—Cemetery.—Chartered: Round Rock Cemetery, with capital stock of $7000, by F. L. Aten, J. M. Jester and George Henley.

San Antonio—Mercantile.—Chartered: Louis Book & Cigar Co., with capital of $5000, by David Sanders and others.

San Antonio—Irrigation System.—R. H. Russell of San Antonio and J. A. Simmons of 20 Broadway, New York city, are organizing company to utilize the sewerage system of the city for irrigation purposes, developing thereby agricultural lands near San Antonio. One mile of tunnel work and four miles of open-ditch work is to be contracted for.*

Seguin—Milling.—Seguin Milling & Power Co., with capital of $50,000, has been incorporated by J. T. Holmes, Walter Nolte, H. Trcell and others.

Texas—Oil-refining Company.—Chartered: Texas & California Oil Refining Co., for operations in Texas and California, by Chas. J. Wells of Los Angeles, Cal., and others.

Thurber—Brick Works.—Texas & Pacific Coal Co. will double capacity of its brick works.

Wallisville—Woodworking Factory.—O. H. De Lamorton, president and general manager Texas Oil, Land & Investment Co., is installing general woodworking plant, as recently reported; plant includes saw-mill, furniture factory, picket factory, molding factory, turning factory, together with sash, door and blind factory, at a cost of $75,000.*

Wharton—Syrup Mill.—R. A. Armstrong & Son will erect a syrup mill.

Winnsboro—Creamery.—Winnsboro Creamery Co. has been incorporated, with capital stock of $15,000, by H. J. Mitchell, C. W. Moore and J. H. Patrick and others.

Winters — Water-works. — Winters Water Co., with capital of $10,000, has been incorporated by J. H. Grant, F. L. Pierce, G. W. Murray and others.

VIRGINIA.

Chase City—Lumber Mills.—Lord & Watson Lumber Co. of New Jersey has purchased twenty acres of land near Chase City, on which it will place its mills and machinery.

Dorchester—Coke Ovens.—Colonial Coal & Coke Co. has purchased 3400 acres of coal land, and will erect 300 additional ovens.

Graham—Iron Furnace:—Graham Iron Co. will blow in its furnace.

Hampton—Water-works.—A. L. Osgood, recently reported as having franchise for construction of water-works, has incorporated a company with capital stock of $500,000. Chas. Collier is president; A. L. Osgood, vice-president; Chas. C. Collier, secretary, and E. A. Corbin, treasurer, all of Philadelphia, Pa.

Leesburg—Electric-power Plant.—B. B. Chichester will construct plant to transmit power to outlying districts, as reported recently, and has formed the Loudoun Electric Development Co. for the purpose.

Leesburg — Telephone System. — M. E. Church of Falls Church, Va., has made a proposition for construction of telephone system from Leesburg to Washington, D. C., and Alexandria, Va.

Lynchburg—Tanning and Dyeing Extract Works.—John H. Heald & Co. has been incorporated, with capital stock of not less than $200,000 nor more than $300,000, for grinding wood, bark and other substances, and to manufacture tanning and dyeing extracts. Chas. E. Heald is president; J. M. D. Heald, vice-president; Edward E. Heald, secretary and treasurer. Address J. M. D. Heald, Manufacturers' Record Building, Baltimore, Md.

Newport News—Water Company.—Peninsula Water Co. will organize for construction of system to furnish the entire Virginia peninsula with water. It is reported that the new Hampton Roads Railway & Electric Co. is interested.

Norfolk — Overall Factory. — Chartered: Union Overall Co., capital $5000, to manufacture overalls, etc.; Samuel Sherrick, president; Barton Myers, treasurer, and L. Bach, secretary.

Petersburg—Woodworking Factory.—Petersburg Rim & Veneer Co. is extending its barrel and keg heading plant.*

Portsmouth — Amusement Company.—Battery Park Amusement Co. has incorporated, with capital stock of $25,000, for establishing an amusement park, constructing bridges, wharves, piers, hotels, etc. J. E. Duke of Norfolk is president; J. H. Livingston of Atlantic City, N. J., vice-president; A. J. Phillips of Portsmouth, secretary and treasurer.

Pulaski City—Mercantile.—Company has been formed, with capital stock of $10,000, for conducting general grocery business, by B. P. Miller (president) and others.

Richmond—Planing Mill and Dry-kilns.—W. J. Whitehurst will rebuild his planing mill and dry-kilns, reported lately as burned.

Richmond—Grist Mill.—It is reported that a company is being organized to purchase or lease Gallego Mills' warehouse and to install machinery for operating a grist mill; steam or electricity will be the power used; Thos. F. Todd owns property at present.

Richmond — Supply Company. — United States Supply Co. has been incorporated, with capital stock of from $5000 to $10,000, by Chas. T. O'Ferrall, president; Geo. A. Lathrop, Jr., vice-president, and James Mullin, secretary.

Roanoke—Mineral Springs.—Franklin Mineral Springs Co. has been incorporated for purchasing the Franklin Mineral Springs and marketing the water. James R. Terry is president; C. A. McHugh, vice-president, and C. M. Speese, secretary and treasurer.

Stuart—Furniture Factory.—Company is being organized for establishment of a furniture factory. Among those interested are W. H. Clark and M. V. Stedman.

Suffolk—Cornmeal Mill.—Barton & Jeffreys of Orange, Va., will establish a cornmeal mill in Suffolk with capacity of 700 bushels per day; three-story brick building 40x36 feet will be erected.

West Point—Package Company.—Chesapeake Package Co. has been incorporated, with capital of $25,000, by J. P. Tabb, Chas. K. Harrison, J. C. M. Lucas of Baltimore, Md., and S. S. Ford of West Point.

WEST VIRGINIA.

Benwood—Tube Works.—National Tube Co. will construct new threading floor and add considerable machinery, to employ 150 more men.

Black Betsy—Coal Mines.—Black Betsy Coal & Mining Co. has been incorporated to develop coal mines, etc., by Emma T. Banigan, Alfred S. Clark of Providence, R. I.; E. L. Tyree and J. H. Nash of Charleston, W. Va. Capital stock is $600,000.

Clarksburg—Hardware Company.—Clarksburg Hardware Co., with capital stock of $100,000, has been incorporated by J. A. Crislip, G. J. Fullerton and others.

Fairmont — Coal Mines, etc. — James B. Coryell, F. B. Lott, C. S. Hebrad and Judge Mayer of Philadelphia, Pa.; E. M. Showalter, R. C. Dunnington and F. E. Nichols of Fairmont, have purchased at about $100,000 700 acres of coal lands, etc., from Cook Coal & Coke Co. They will develop thoroughly the property, opening new mines, erecting coke ovens, installing modern equipments for the purposes.

Grafton—Industrial Company.—Chartered: Grafton Industrial Co., with capital stock of $25,000, by William D. Hendrickson, W. Morgan, Lloyd P. Saunders and others.

Grafton—Coal Mine.—Pittsburg (Pa.) parties will purchase the coal properties in Preston county of Mrs. Adelie De Billier, make improvements and mine the property on an extensive scale.

Grafton—Brick Works.—Stephen W. and Thomas E. Joyce will establish works with daily capacity of 35,000 bricks.

Hemlock Hollow (not a postoffice)—Coal Mines.—A. S. Guthrie and others of Fayette county have incorporated Hemlock Hollow Coal & Coke Co., with capital stock of $25,000.

Huntington—Coal Mine.—Mr. Hadley will develop coal mine. W. W. Miller of Kellogg, W. Va., is engineer in charge.

Martinsburg — Limestone Quarry. — Pittsburg (Pa.) Limestone Co., Limited, has purchased twenty acres of limestone lands near Martinsburg, and will develop same.

Martinsburg—Mining.—Chartered: Berkeley County Mining & Fruit Co., with capital of $10,000, for mining and fruit-growing, by S. S. Felker, C. M. Lamar, E. D. Gardner and others.

Mingo County—Coal Mines.—Red Jacket Coal & Coke Co. has been incorporated, with capital stock of $2,500,000, for development of coal mines. Company has five mines equipped, with capacity of 800,000 to 1,000,000 tons per annum. R. M. Gilbert of 18 West Fifty-third street, New York, is president; H. D. Laferty of Roanoke, Va., vice-president and treasurer, and Frank A. Hill of Roanoke, Va., general manager. Principal office in Roanoke, Va.

Morgantown—Gas Company.—Iron City Oil & Gas Co. has received franchise for supplying the entire city with natural gas, and will extend its mains.

Morgantown—Glass Factory.—J. F. Adamson, P. O. Box 642, has just completed a window-glass factory, tank system for forty-eight blowers, and contemplates building several more factories in West Virginia, one of which will be a plate-glass factory employing 600 operatives.

New Martinsville—Electric-light Plant.—New Martinsville Electric Light, Heat & Power Co. has been organized, with capital of $50,000, for establishing electric-light plant, by Frank Hall, N. C. Hamilton, J. C. Brady, C. M. Ford and T. M. Garvin.

Parkersburg—Machine Company.—Parkersburg Machine Co. has been chartered for handling mining and well-drilling machinery, etc., by A. M. Stiles, H. B. Hogg, F. G. Davis and others; capital $25,000.

Parkersburg—Oil and Gas Wells.—Colonial Oil Co., with capital stock of $2,000,000, has been incorporated for developing oil and gas lands, by B. H. Ambler, H. L. Stout and others.

Volga—Coal Mines.—Alexander Shaw and others of Baltimore, Md., have incorporated Indian Fork Coal & Coke Co., with capital stock of $300,000.

Wheeling—Oil Company.—Loyal Oil Co., with capital stock of $1,000,000, has been incorporated by W. L. Russell, F. C. Cox, R. K. Giffen, Jr., and others.

INDIAN TERRITORY.

Muscogee—Water-works.—City will issue bonds for construction of water-works. Address "The Mayor."

South McAlester—Brick Works.—H. H. Keller of St. Louis, Mo., will organize $100,000 company for establishing pressed-brick plant.

OKLAHOMA TERRITORY.

Billings—Mercantile.—Chartered: Missouri Mercantile Co., with capital stock of $5000, by F. W. Lewis and others.

Blackwell—Townsite.—Chartered: Busline Townsite Co., with capital stock of $100,000, by B. L. Jones, Harrison L. Drummond of St. Louis, Mo.; Seeley Dunn of Blackwell and others.

Cleveland—Mining, etc.—Chartered: Eastern Prospecting, Mining & Development Co., with capital of $25,000, by G. W. Sutton, O. A. Gilbert, J. P. Matin and others.

El Reno—Electric-light Plant.—Franchise has been granted to John A. Newton of El Reno, Geo. B. Loving and John M. Scott of Fort Worth, Texas, for erection of electric-light plant.

Enid—Mining.—Chartered: Anaconda Gold & Copper Mining & Improvement Co., with capital stock of $500,000, by C. N. Galesburg, C. L. Brobley, B. R. Lewis, A. M. Ogden and others.

Federal—Mining, etc.—Federal Townsite & Mining Co. has been incorporated, with capital of $15,000, by A. R. Ford, Chas. S. Lee of Kansas City, Mo.; C. W. Dugan of El Reno, O. T., and others.

Frederick — Hardware Company. — Chartered: R. C. Neal Hardware Co., with capital stock of $10,000, by R. C. Neal and others.

Hobart—Telephone System.—Oklahoma & Southwestern Telephone Co. has been incorporated, with capital of $45,000, by George Sturgeon, J. M. Chapman, J. M. Applegate and others of Kansas City, Mo.

Hobart—Mining Company.— Southwestern Mining Co., with capital stock of $25,000, has been incorporated by C. H. Beach, A. A. Hooks, E. W. Wamsley and others.

Hobart—Mining.—Wichita Mining & Development Co., with capital stock of $25,000, has been incorporated.

Lawton—Oil and Gas Wells, etc.—Chartered: Oklahoma Southern Oil, Gas & Mining Co., with capital stock of $500,000, by S. T. Longman of New York, president; H. R. McGill of Shawnee, O. T., vice-president; J. M. Patterson of Lawton, secretary, and M. C. Runyon of Norman, O. T., treasurer.

Lawton—Oil Wells.—Grisly Bear Oil Co., with capital stock of $1,000,000, has been incorporated by S. H. King, C. O. Tingley, G. W. Randlett of Pomeroy, Iowa; E. E. Hatch of Lawton and others.

Oklahoma City — Real Estate.— Jennings Real Estate Co. has been incorporated, with capital stock of $25,000, by W. E. Jennings, B. C. Jennings and others.

Oklahoma City—Cotton Company.—Oklahoma Round Bale Cotton Co. has increased capital from $50,000 to $100,000.

Oklahoma City—Sash, Door and Blind Factory.—Curtis Bros. & Co. of Clinton, O. T., will, it is reported, establish a branch of their sash, door and blind factory in Oklahoma City; large warehouse will also be erected.

Oklahoma City—Saddlery Company.—E. M. Jones Saddlery Co. has been incorporated, with capital stock of $100,000, by E. M. Jones, C. H. Anderson, T. Hughes and others.

Pawnee — Construction Company. — Chartered: J. N. Coulter Construction Co., with capital of $10,000, by J. N. Coulter, H. L. Lauthers and G. P. Moore.

Perry—Mining.—Perry Mining & Industrial Co., with capital of $10,000, has been incorporated by M. Barash, B. J. Woodruff, James Bryan and others.

Woodward—Teelphone System.—Home Enterprise Telephone Co. has been incorporated, with capital of $10,000, by C. R. Alexander, E. S. Wiggins, Geo. H. Brophy and others.

BURNED.

Buckhannon, W. Va.—Buckhannon Woolen Mill Co.'s mill; loss said to be $18,000.

Crockett, Texas.—J. W. Lucas' gin and mill; loss $1500.

Douglas, W. Va.—Cumberland Coal Co.'s tipple.

Fort Lawn, S. C.—Barnett ginnery.

Knoxville, Tenn.—Harvey Abram's machine shops; loss $3000; also W. H. Bowman & Co.'s iron fence works; loss $2000.

Lonsdale, Tenn.—Southern Oak Extract Co.'s plant; loss $25,000.

Morven, N. C.—W. B. Sellers' cotton gin.

Norfolk, Va.—Atlantic Peanut Co.'s plant damaged to extent of $5000.

Savannah, Ga.—Savannah Box and Basket Works; estimated loss $10,000.

St. Louis, Mo.—J. H. Belz Packing Co.'s plant damaged to extent of $10,000.

Union, S. C.—Dr. J. A. Hancock's cotton gin.

Winston, N. C.—H. A. Styers' grist mill; loss $1250.

BUILDING NOTES.

Augusta, Ga. — Union Depot. — Augusta Union Station Co. has been organized, with capital stock of $250,000, to build new union passenger station. Thos. K. Scott is president, and Mr. Hilliard, secretary. Frank P. Milburn of Columbia, S. C., has been selected to prepare plans and specifications.

Baltimore, Md. — Warehouse. — Hammond Ice Co. has let contract to John A. Sheridan for erection of one-story warehouse 100x100 feet, to cost $8000.

Baltimore, Md.—Warehouse.—Armour Fertilizer Co. will erect warehouse, one story, brick, 300x57 feet.

Baltimore, Md. — Apartment-house. — Bernard N. Baker has purchased Mount Vernon Hotel, and proposes to erect on the site a 16-story apartment-house.

Baltimore, Md.—Dwellings.—Luzerne Land Co. will erect a row of two-story dwellings at a cost of $20,800.

Beaumont, Texas—Store and Office Building.—C. T. Heisig will open bids December 18 for erection of a three-story brick, stone and terra-cotta store and office building with floor space 86x120 feet. Plans and specifications at office of U. O. Long, architect, 11 Kyle Building. Usual rights reserved.

Beaumont, Texas—Office Building.—W. P. H. McFaddin is having plans made for erection of four-story brick and terra-cotta office building 50x185 feet, to be piped for gas and have steam-heating apparatus.

Beaumont, Texas—Business Building.—Mason & Hamilton have prepared plans and G. D. Patterson has contract for rebuilding Dunlap-Cunningham building, previously burned; cost $7000.

Birmingham, Ala.—Club.—Plans of Miller & Martin have been accepted for proposed Athletic Club building, which will cost $30,000.

Charlotte, N. C.—Office Building.—Piedmont Realty Co. will open bids December 20 for the construction of its office building previously reported. Plans and specifications on view at office of Architects Hook & Sawyer, Piedmont Building. Address bids to Stewart W. Cramer, chairman of committee.

Chickasha, I. T.—School.—City will issue $60,000 of bonds for school purposes. Address "The Mayor."

Choctaw Point, Ala.—Depot.—Bids will be opened at office of lighthouse engineer, Mobile, Ala., December 30 for furnishing materials and labor and constructing depot at

Choctaw Point, in accordance with specifications, copies of which, with blank proposals and information, may be had on application to Lieut.-Col. A. N. Damrell, U. S. A.

Corryton, Tenn.—Depot.—Southern Railway Co. will erect new depot at Corryton; F. S. Gannon, general manager, Washington, D. C.

Dallas, Texas—Mercantile Building.—Graham Dry Goods Co. has purchased site for $22,000, and will erect a five-story building.

El Paso, Texas—Warehouse.—Henry Pfaff has purchased site at $10,500, and will erect large warehouse.

El Paso, Texas—Car Barn.—El Paso Electric Street Railway Co. has let contract to P. J. Callan for erection of its $12,000 car barn.

Fairmont, W. Va. — Apartment-house. — Hutchinson Bros. have had plans made for a three-story brick apartment-house to cost $60,000.

Fallbranch, Tenn.—School.—City is erecting $5000 school building. Address "The Mayor."

Fort Monroe, Va.—Barracks, etc.—Frank Pigeon & Co. have received contract for building the new barracks at Fort Monroe, and J. H. Brinson of Hampton contract for erecting the guardhouse; cost $100,000.

Fredericksburg, Va.—Hospital.—M. J. Dimmock is preparing plans for proposed enlargements to Mary Washington Hospital.

Hagerstown, Md.—Hotel, etc.—Lewis L. Pullman of Chicago and associates will erect hotel, cottages, and establish summer resort. J. O. Snyder of Hagerstown is attorney.

Hartselle, Ala.—Hotel.—C. H. Cooper will erect new hotel to replace one recently burned.

Jacksonville, Fla.—Bank Building.—Mercantile Exchange Bank, S. B. Hubbard, president, is having plans made by E. H. Glidden for erection of bank building.

Jacksonville, Fla.—Residence.—Dr. F. P. Hoover has had plans made by Francis J. Norton for erection of dwelling to cost $21,500.

Jennings, La.—Office Building.—E. W. Rowson & Co. have accepted plans for proposed brick office building, two stories, terra-cotta front, lighted with electricity and have all other modern equipment; contract will be let at once.

Knoxville, Tenn.—Store Building.—Judge John K. Shields will erect store building.

Linden, Ala.—Courthouse.—F. M. Dobson of Jasper, Ala., has received contract for erection of courthouse at Linden (recently reported); cost $33,500. Smith & Blackman prepared plans.

Martinsburg, W. Va.—Office Building.—Wm. T. Stewart has purchased site for $5500, and will erect a three-story brick office building.

McRae, Ga.—Jail and Residence.—Bids will be opened January 13 for erection of two-story jail and jailer's residence of brick; Geo. W. Wilcox, commissioner.

Natchitoches, La.—Bank Building.—Exchange Bank of Natchitoches will erect new building, as lately reported; to be two stories, of brick, 26x55 feet, with all modern improvements.

Natchitoches, La.—Hotel.—A company will erect three-story brick hotel and stores building 75x120 feet. Address J. C. Trichel, Jr., cashier Exchange Bank of Natchitoches.

New Lewisville, Ark.—Courthouse.—Frank W. Gibbs will prepare plans for Lafayette county's proposed new $40,000 courthouse, two stories, pressed brick, slate roof, 70x95 feet.

New Orleans, La.—Store Building.—Thomas Scully is preparing plans for erection of a six-story brick and terra-cotta store building at 727 Canal street; will be fireproof and contain all modern improvements.

Norfolk, Va.—Stores.—Contract has been awarded Worrell & Williams at $6673.75 for furnishing materials and converting southern end of market building into twelve stores.

Plymouth, N. C.—Academy.—Chilcutt & Bramble of Elizabeth City, N. C., have contract for erection of brick academy at Plymouth.

Richmond, Va.—Dwellings.—H. B. Kirkwood is having plans made by William C. West for erection of six two-story dwellings. H. H. Beers will erect two three-story brick and brownstone dwellings.

Salem, W. Va.—Theater.—Company is organizing to buy Parkersburg Brewing Co.'s theater and improve it at a cost of $10,000.

Tallahassee, Fla.—Capitol Improvements. J. E. Parrish of Lynchburg, Va., has received contract at $66,000 for proposed additions and alterations to Florida State capitol.

Washington, D. C.—Apartment-house.—B. Stanley Simmons is preparing plans for five-story apartment-house, also for five three-story dwellings, to have all modern improvements, for Samuel L. Phillips. H. A. Campbell is preparing plans for five three-story dwellings at Third and T streets N. W., to have steam heat, etc.

Waxahachie, Texas—University Buildings. D. Mahoney has received contract at $48,000 for erection of buildings for Trinity University, recently reported.

West Raleigh, N. C.—Hall, etc.—Board of trustees North Carolina College of Agriculture and Mechanic Arts has ordered the rebuilding of Watauga Hall, recently burned; structure will be enlarged to contain twice as many rooms as before, and to be used exclusively for students' dormitories; board also ordered erection of separate three-story armory, dining-room and chapel, to cost $26,000; Geo. T. Winston, president.

Wrightsville, N. C.—Hotel.—Wrightsville Beach Hotel Co. will build a $10,000 addition to its hotel.

RAILROAD CONSTRUCTION

Railways.

Alexandria, La.—It is announced that tracklaying has begun upon the extension of the Shreveport & Red River Valley Railroad between Alexandria and Mansura, La., an estimated distance of thirty miles. P. McIlvried at Shreveport is general manager of the company.

Arlington, Ga.—The latest report concerning the extension of the Georgia, Florida & Alabama Railroad (formerly the Georgia Pine Railroad) is to the effect that the mileage from Arlington to Cuthbert will be completed in a few months. Contracts have also been let on the line from Bainbridge to Tallahassee, Fla. J. P. Williams at Savannah is president of the company.

Atoka, I. T.—It is reported that a railroad may be constructed from Atoka to asphalt mines in Indian Territory, recently purchased by a St. Louis syndicate. Adolphus Busch of the Anheuser-Busch Brewing Association of St. Louis is reported as interested.

Beaumont, Texas.—It is reported that a company called the Beaumont, Northern & Choctaw Railroad Co. has been organized to build from Beaumont to South McAlester, I. T. The Missouri, Kansas & Texas Company is said to be interested in the proposed line. Surveys are now being made.

Birmingham, Ala.—Work has begun upon the rebuilding of the railroad between Birmingham and Bessemer for the use of trolley motors. It is stated that the line will be relaid between Birmingham, Bessemer and Powderly, and the work will comprise nineteen miles of track. A portion of the material has already been purchased. Robert Jemison of Birmingham is president of the company.

Corsicana, Texas.—I. L. Campbell, general manager of the Warren & Corsicana Pacific Railroad Co., writes the Manufacturers' Record that this company is now making arrangements for a further extension north from the present terminus of the railroad, and has applied for authority to issue bonds to finance the undertaking. Mr. Campbell may be addressed at Houston, Texas.

Dallas, Texas.—The latest report concerning the Dallas & New Mexico Railroad, recently referred to in the Manufacturers' Record, is to the effect that construction will begin about January 1. A. B. Wilgus of Dallas is president of the company.

Dalton, Ga.—It is announced that the Dalton & Alaculsy Railroad Co. will have its charter amended, giving it authority to construct the proposed extension to Murphy, N. C., and that surveys for the extension will be completed immediately. J. W. Beard of Dalton, Ga., is general manager, and M. S. Squires of Binghamton, New York, is one of the principal promoters.

Danville, Va.—It is announced that four counties have subscribed to the stock of the Mount Rogers & Eastern Railroad, proposed from a point in the western portion of Virginia to a terminus on tidewater. The estimated length of the line is 450 miles, and surveys are being completed. J. D. Perkins is president of the company, and Arthur Meigs of Jacksonville, Fla., general manager.

Decatur, Ala.—Mr. John Carlisle of Cincinnati, Ohio, one of the promoters of the Central Railway Co. of Alabama, writes that the estimated length of the line is seventy miles, and it is to be built between Decatur and Jasper. Preliminary surveys have been made. No arrangements relative to issuing bonds have been decided upon as yet.

Fort Myers, Fla.—It is stated that surveys are being made for the proposed South Florida & Gulf Coast Railroad between Punta Rassa and Fort Pierce, an estimated distance of 150 miles, by way of Fort Myers. Branches may be built to Kissimmee, Fla., also to Bartow. This is the road which is being promoted by a company of which John M. Roach is president, and M. B. Herely, secretary and treasurer. The company may be addressed at 240 Rialto Building, Chicago.

Fort Smith, Ark.—Contracts have been let for sections of the Fort Smith & Western Railroad between Fort Smith and Guthrie, Okla., to the Cherryvale Construction Co. of Cherryvale, Kan.; the McDonald Construction Co. of Kansas City and the Fruin-Bambrick Company of St. Louis. Work is to begin immediately. George Hayden of Ishpeming, Mich., is president of the railroad company.

Jackson, Tenn.—A correspondent of the Manufacturers' Record writes that the proposed railroad between Jackson and Clifton would traverse a valuable coal and timber territory. A company may be formed to take up the project in the near future.

Jennings, La.—It is reported that local parties have become interested in a plan to construct an electric railroad from Jennings to Lake Charles, La., an estimated distance of thirty-three miles, and that surveys may be made in the near future.

Knoxville, Tenn.—A. W. Lee of Clearfield, Pa., is president, and W. M. McCormick, Girard Building, Philadelphia, vice-president, of the Little River Railroad Co., which proposes building a line in Eastern Tennessee along the Little river valley, an estimated distance of twenty-two miles. The railroad will reach timber lands controlled by the promoting company.

Knoxville, Tenn.—It is reported that the Toronto (Ont.) syndicate interested in the proposed electric railroad between Knoxville and Sevierville is about to take up the matter, and will make surveys of the route. W. T. Goffe, one of the promoters, may be addressed at Kimberlin Heights, Tenn.

Leaksville, Va.—The question of building an electric railroad between Leaksville and Ridgeway is being agitated by the business men of the towns mentioned.

Louisville, Ky.—It is announced that work is to begin immediately upon the proposed electric railroad between Louisville and West Point. The estimated length of the road is twenty miles, and it is expected to issue $150,000 in bonds in the interest of the project. Samuel Avritt of Louisville is one of the promoters.

Memphis, Tenn.—It is announced that Messrs. Caldwell & Smith of Memphis have secured a contract to construct a portion of the Memphis, Helena & Louisiana Railroad, to be built along the west bank of the Mississippi river, connecting Memphis with New Orleans. This is the project in which the Gould syndicate is interested. Russell Harding of St. Louis, vice-president of the Missouri Pacific Company, is one of the directors.

Mobile, Ala.—H. Austill, one of the promoters of the Mobile & West Alabama Railroad, informs the Manufacturers' Record that parties in Detroit and New York have become interested, and that surveying parties are to go over the route within the next few months to complete this work.

Mobile, Ala.—F. B. Merrill, president of the Mobile, Jackson & Kansas City Railroad Co., confirms the report in the Manufacturers' Record that the company has decided to extend from a point near Augusta, Miss., to Memphis by way of Laurel. The estimated length of the extension is 300 miles, and surveys have been completed for a distance of sixty-five miles. Contracts for the first section are to be let at once. The extension to Hattiesburg, Miss., is now under way, and is to be completed by March 1.

New Madrid, Mo.—The Memphis & St. Louis Railroad Co. has been chartered, with $500,000 capital stock, to construct a line through New Madrid county from a point on the St. Louis & Memphis Railroad to Gray's Point, in Scott county, an estimated distance of fifty miles. Among those interested are Seth S. Barnes and Wm. A. Barnes of New Madrid, who have been connected with the St. Louis & Memphis road.

New Orleans, La.—It is reported that the Southern Pacific Railway Co. has determined to expend about $3,000,000 upon the system between New Orleans and El Paso, Texas, in reballasting and relaying track at various points, also in the construction of several branch lines. G. W. Boschke at Galveston is engineer.

Oklahoma City, Okla.—It is reported that the Chicago, Rock Island & Pacific Railroad Co. is now completing surveys from El Reno to Oklahoma City, and that such an extension may be built in the near future. W. E. Dauchy at Chicago is chief engineer of the company.

Parkersburg, W. Va.—It is reported that the Parkersburg & Interurban Electric Railroad is to form part of a trolley system which will extend from Cincinnati, Ohio, to Wheeling by way of Parkersburg. C. H. Shattuck is one of the promoters of the system.

Rixville, Ga.—The stockholders of the Wadley & Mt. Vernon Railroad, it is announced, have ratified the decision of the directors to extend from Rixville to Valdosta. G. D. Tysor at Wadley, Ga., is general manager of the company.

St. Louis, Mo.—It is reported that the Wabash Railroad Co. is considering a number of important changes on its line within the city limits, and that an elevated road about one and one-half miles long may be constructed. W. S. Lincoln at St. Louis is chief engineer.

Tallahassee, Fla.—A report is current that the Florida Grand Trunk Railroad project has been revived, and that Western parties have become interested in a plan which is to build from Tallahasse to Tampa. John N. King of Newberry, Fla., is reported as interested.

Tuscaloosa, Ala.—It is announced that contracts for building the Warrior Southern Railroad have been let to Messrs. W. J. Oliver & Co. of Columbia, S. C. The line will form an extension of the Mobile & Ohio division of the Southern system, extending through a portion of Tuscaloosa county. It is reported that eventually it will form a connection with the Ensley Southern Railroad, now being completed by the Southern Company.

Union Springs, Ala.—W. M. Blount, president of the Union Springs & Northern Railroad, writes the Manufacturers' Record that it is expected to let contracts for twenty miles of an extension in the near future. It is reported that the road will terminate at Birmingham, Ala. Mr. Blount may be addressed at Union Springs.

Waldron, Ark.—The Kansas City, Hot Springs & Southeastern Railroad Co. has been chartered in Arkansas, with $1,250,000 capital stock, to build a railroad from Waldron to Hot Springs through portions of Montgomery and Garland counties, an estimated distance of eighty-two miles. C. C. Godman of Fort Smith and Hon. T. G. Bates are among the directors of the company.

Waldron, Ark.—An official of the Arkansas Western Railroad informs the Manufacturers' Record that the extension between Cauthron and Waldron is under construction, and it is to be completed about January 1. C. C. Godman at Fort Smith, Ark., is president of the company, and Francis C. Downey, No. 100 American Bank Building, Kansas City, Mo., is assistant secretary.

Washington, D. C.—The latest report concerning the Washington & Gettysburg Railroad is to the effect that it is expected to begin grading before January 1. It is announced that the necessary securities have been floated to insure construction. Geo. H. Harries of Washington is one of the principal promoters.

Street Railways.

Beaumont, Texas.—I. D. Polk is interested in the proposed street railroad in the city and suburbs. It is stated that steps have been taken to enlist New York parties in the project and build the line within the next year. It is proposed to float $220,000 in bonds for the railway, also for a water-works system.

Bonham, Texas.—J. C. Saunders, secretary of the Bonham Electric Light & Power Co., informs the Manufacturers' Record that an extension to the railway system is being built and several other improvements made. The company has issued bonds to the extent of $10,000.

Oklahoma City, Okla.—C. F. Colcord and A. H. Classon are interested in the Oklahoma City Street Railway Co., recently chartered with $200,000 capital stock.

Savannah, Ga.—It is announced that the Edison Illuminating Co., which has secured control of the street railways in Savannah, will rebuild what is known as the Montgomery line for the use of trolley motors, and may construct several extensions as well. Geo. J. Baldwin is president of the company.

South McAlester, I. T.—L. W. Bryan and others have organized the Indian Territory Traction Co., which, it is stated, will construct an electric railroad in South McAlester and suburbs. The company is capitalized at $200,000.

A Consolidation.—The Galena Oil Co. and the Signal Oil Co. of Franklin, Pa., announce that they have merged their interests into one corporation, to be known as the Galena-Signal Oil Co., which will continue the business of the former concern at the same place.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Bag-filling Machines.—Borton & Tierney Co., Stephen Girard Building, Philadelphia, Pa., wants addresses of makers of bag-filling machines.

Bagging Machinery.—Stewart Phinizy, Augusta, Ga., wants addresses of makers of machinery for manufacturing burlap and jute bagging.

Belting.—See "Flour-mill Machinery."

Boiler and Engine.—Baltimore Feldspar Co., 39 Hanover street, Baltimore, Md., is in the market for a slow-speed engine from 125 to 150 horse-power, also two horizontal boilers, seventy-five horse-power each, and an iron smokestack to suit; new or second-hand.

Boiler and Engine.—See "Woodworking Machinery."

Bolt Works.—A. J. Daniels, Owensboro, Ky., wants information regarding bolt works and prices on machinery required.

Brick Manufacturers.—E. G. Wightman, office, Twenty-ninth and P streets, Richmond, Va., wants addresses of manufacturers of vitrified brick for paving.

Bridge.—James L. Crossley, clerk county commissioners, Greensboro, Ga., will open bids February 6 for building iron and steel bridge over Oconee river, to consist of two steel spans on steel cylinder piers, together with about 252 feet of steel trestle approach. Bids on approach to be by lineal foot. Steel spans to be 144 feet and 80 feet long, respectively, and entire bridge to have roadway of twelve feet, except one turnout of eighteen feet; top of piers for spans to be thirty-four feet above low-water level. Certified check for $500 to accompany each bid. Bond required and usual rights reserved. Plans and specifications on file in office of clerk of board.

Broom Machinery.—Nelson & Winfree, Kernersville, N. C., want addresses of manufacturers of broom machinery.

Canal Work.—Abbeville (La.) Canal Co. invites bids for grading on five miles of irrigation canal, about 90,000 cubic yards. For particulars address F. T. Foote, engineer.

Cannery Equipment and Supplies.—H. A. Clark, McMinnville, Tenn., wants addresses of makers of cannery equipment and supplies.

Cotton Gin.—Sumter (S. C.) Oil Mill wants bids on four-gin outfit complete.

Covering Machinery.—See "Pipe-covering Machinery."

Decorticating Machine.—W. D. Holden, Orlando, Fla., wants to correspond with makers of machinery for decorticating, diffusing and evaporating a woody fiber in making an extract tannin from palmetto.

Dry-kiln.—Jas. M. Wood, Gaines Cross-Roads, Va., wants second-hand kiln of about 600 feet drying surface.

Dry-kiln Equipment.—See "Woodworking Machinery."

Electric-light Plant.—O. H. De Lamorton, president Texas Oil, Land & Investment Co., Wallisville, Texas, will need complete electric-light plant.

Electric-light Plant.—Frederick, Md., will probably need new engine from 150 to 200 horse-power or more, with corresponding boiler or boilers for same; also two dynamos and other equipment for enlarging its electric-light plant; Geo. Edw. Smith, mayor.

Electric-light Plant.—J. Robert Jones, chairman committee, Huntsville, Ala., wants to obtain information and estimates on construction of electric-light plant for city.

Engine.—See "Machine Tools."

Engine.—See "Woodworking Machinery."

Engine.—White Furniture Co., Mebane, N. C., wants 200-horse-power (Corliss) engine.

Excavating Work.—Wanted—Bids on one mile of tunnel work and four miles of open-ditch work at San Antonio, Texas. Address R. H. Russell, San Antonio, or J. A. Simmons, 20 Broadway, New York.

Feed Mill.—F. M. Randall, Olney, Mich., is in want of new machinery for feed mill.

Fire Apparatus.—Charlotte Pipe & Foundry Co., Charlotte, N. C., is in the market for a chemical fire apparatus.

Flour-mill Machinery.—M. M. Terrell, Auburn Mills, Va., is in need of elevating belting four inches wide, elevator cups 3x3 inches, sifter and purifier.

Foundry Equipment.—Enterprise Machine Works, Bristol, Tenn., is in the market for all kinds of metals and pipe fittings.

Furnace Hoist.—Wanted—Second-hand furnace hoist in good condition; state make, size, cylinders, gearing, diameter and face of drum, net price and time of delivery; to hoist 800 tons of material per day for 80-foot furnace. Address A. C., P. O. Box 906, Birmingham, Ala.

Furniture Factory.—See "Woodworking Machinery."

Gasoline Engine.—See "Machine Tools."

Grading.—See "Canal Work."

Heating Plant.—Estimates are desired on 1500 square feet of radiating surface for heating large building either by hot water or steam. For further information address M. H. Crump, Bowling Green, Ky.

Hoisting Equipment.—See "Furnace Hoist."

Ice Plant.—A. J. Scott, 1708 Jenkins street, Menominee, Mich., wants estimates on 15-ton ice plant complete (except building) f. o. b. factory.

Iron-working Machinery.—See "Bolt Works."

Ironworking Machinery.—See "Shovel-making Machinery."

Laundry Machinery.—J. M. Robinson, Norton & Co., Louisville, Ky., will be in need of laundry and collar-turning machinery.

Lumber Machinery.—Kirkland Lumber Co., Tampa, Fla., contemplates importing cedar and manufacturing it into lumber for making cigar boxes, and wants addresses of manufacturers of machinery for making this kind of lumber.

Lumber-mill Machinery.—W. W. Lambert & Co., Poplarville, Miss., want an automatic circular saw-filing machine and a swage; second-hand will do.

Machine Tools.—Charlotte Pipe & Foundry Co., Charlotte, N. C., is in the market for second-hand engine lathe with 14 to 16-inch swing, seven to eight feet between centers.

Machine Tools.—Roy & Jones, Alexandria, Tenn., are in the market for an 18-inch swing lathe, eight feet between centers; one drill press, hand feed; one shaper, 14-horse-power horizontal gasoline engine, new or second-hand.

Malleable-iron Workers.—W. L. Wallace, Sweetwater, Tenn., will want to contract for manufacture of malleable-iron door check to be finished in nickel or oxydized copper; Southern manufacturers preferred.

Marine Machinery.—W. O. Rew, Myers, Fla., wants two Clyde boilers, diameter sixty inches, length of fire flue sixty inches, diameter per flue thirty-six inches, of tubes three inches, of steam dome forty inches, height thirty-six inches, back connection built of one-quarter-inch iron, but not lined; depth twenty-four inches from flue sheet and full diameter of boiler; each to carry 150 pounds of steam and comply with marine laws; wants iron tubes instead of steel, as commonly used. Also wants engine with two 10x10 cylinders and connected on quarter solid steel crankshaft and counterbalanced slide valve, bull-ring packing, crank and crosshead straps, bolts and keys; all parts made with take-ups; prefers open-fronted single-column slipper guide engine.

Oil-mill Machinery.—Geo. Wilson, secretary Chamber of Commerce, 32 Nassau street, New York city, wants estimates on small experimental oil-mill plant, including machines to strip lint from seed, to remove shell, grind kernel and press meal for oil; also estimate on oil-refining plant, to include equipment for utilizing the waste given off by the oil in soap-making.

Paints.—Charlotte Pipe & Foundry Co., Charlotte, N. C., is in the market for fire-proof paints.

Paper-cutter.—Virginia Fireworks Co., Petersburg, Va., wants to purchase paper-cutter, new or second-hand.

Paving.—Board of public works, Nashville, Tenn., will open bids December 19 for paving, comprising 20,000 yards of granite, 25,600 yards of vitrified brick and 1936 linear feet circular brick trunk sewer, eleven feet inside diameter. For specifications, blanks, etc., address Wm. W. Southgate, city engineer.

Pipe-covering Machinery.—Joseph Fromherz, 335 Carondelet street, New Orleans, La., wants information and prices on machinery, including molds, mixers, etc., for the manufacture of steam-pipe covering.

Pulley.—Jackson Bros. Co., Whaleyville, Va., wants prices with full particulars as to speed and size of pulley on a two to three-horse-power rotary engine, and how soon shipment can be made.

Railway Equipment.—Wm. Minnigerode, Lynchburg, Va., wants a 36-inch geared locomotive, twenty tons; five miles of rails, twenty-five to forty pounds per yard, and twenty logging cars.

Railway Equipment.—St. Louis, Kirkwood & Manchester Railway Co., Thos. McCrady, general superintendent, Wendom, Mo., is in the market for 50,000 white oak ties 6x8x8 feet, twenty miles of T rails, sixty pounds per yard, with joint bolts, spikes and other equipment.

Railway Equipment.—W. M. Blount, president Union Springs & Northern Railroad, Union Springs, Ala., wants estimates on locomotives and coaches, standard gauge, for quick delivery.

Saw-mill.—See "Woodworking Machinery."

Shovel-making Machinery.—Jas. F. Slater, 142 Germain street, Buffalo, N. Y., wants machinery for manufacturing shovels and coke forks; second-hand, but bargains in new equipment considered.

Soap Machinery.—See "Oil-mill Machinery."

Soap Machinery.—Davis Bros., P. O. Box 139, High Point, N. C., want prices on machinery for powdering soap.

Textile Machinery.—See "Bagging Machinery."

Water-works, etc.—J. T. Powell, secretary, Lake Providence (not Providence, as given by error last week), La., will open bids December 18 for sinking artesian well and constructing combined water-works and electric-light plant. Copies of specifications and forms of proposals on application. Certified check for $350 must accompany each bid. Usual rights reserved.

Well-drilling.—H. S. Hubbard & Co., Pikeville, Tenn., want propositions from oil-well drillers for drilling two or three test wells.

Well-drilling Machinery.—W. J. Lunsford, Hiltons, Va., wants prices on well-drilling machinery.

Woodworking Machinery.—Petersburg (Va.) Rim & Veneer Co. is in market for four heading turners, double surfacer planer, two segment resaws, 80-horse-power boiler and 100-horse-power engine.

Woodworking Machinery.—Eagle Manufacturing Co., Rock Hill, S. C., wants second-hand wood-turning lathe with four-step wood cone, 20 to 24-inch swing, rests, full plates, countershaft, etc.

Woodworking Machinery.—C. F. Ohlemacher, Bristol, Tenn., wants prices on second-hand lathe.

Woodworking Machinery.—Brown Furniture Co., Salisbury, N. C., will purchase outfit of machinery for making sideboards and chamber suits.

Woodworking Machinery.—Continental Furniture Co., Fred N. Tate, president, High Point, N. C., wants bids on complete plant for furniture factory, including power plant.

Woodworking Machinery.—O. H. De Lamorton, president Texas Oil, Land & Investment Co., Wallisville, Texas, wants prices quoted for machinery pertaining to planing mills and woodworking factories, including resaws, standing machines, band saws, jig saws, mortising machine, engines, boilers, etc.

Woodworking Machinery.—Burroughs & Collins Co., Conway, S. C., is in the market for a ground board mill of 20,000 feet capacity, 70-horse-power center-crank engine, gang edger, forty feet of live rollers, lumber trimmer, 50-foot sawdust conveyor, dry-kiln equipment, etc.

TRADE NOTES.

To Lumbermen.—On opportunity to purchase an excellent site for a saw-mill is offered by Mr. A. E. Richards, Columbia Building, Louisville, Ky. The site is located on the bank of the Kentucky river and adjacent to timber land. Further particulars will be found in the advertising columns.

To Power-Users.—In another column will be found the anouncement of the sale of two Leffel turbines, which, it is stated, will develop 400 horse-power under fifteen feet working headwater. The Leffel turbines have a wide reputation for efficiency. J. T. McKee of Buena Vista, Va., will give further particulars.

Death of John Best.—The announcement is made of the death of John Best, well known throughout the country in connection with the Best Steam Engine and Boiler Works and the Eureka Bark Mill Co. Mr. Best resided at Lancaster, Pa. James B. Best has been appointed executor of the estate, and will continue the business.

An Important Order.—The St. Louis & Memphis Railway Co. has given an order to Mr. F. M. Hicks of the Hicks Locomotive and Car Works of Chicago for two passenger coaches and two combination cars. The rolling stock will be equipped with the latest appointments, including Westinghouse brakes, Janney couplers and Miller platforms.

More Mills.—As an indication of the activity in mill building in the State of South Carolina, a number of contracts have been let recently for new mills. Nordyke & Marmon Co., Indianapolis, Ind., seems to be getting many of them, one of the latest being a new 50 to 60-barrel swing-sifter system mill to be built at Abbeville by Mr. W. H. Long.

Still Coming.—Apparently there is no cessation in the business of the Ball Engine Co. of Erie, Pa. Recent orders secured include a 175-horse-power engine for the Modoc Coal & Mining Co. of Jacksonville, Ohio; a 300-horse-power engine for the American Ordnance Co. of Bridgeport, Conn., and mechanism for the Evansville (Wis.) Water, Light & Power Co.

Opportunity for Manufacturing.—In another column will be found the announcement of water-power for sale in South Carolina, the site being especially adapted for cotton manufacturing. The property includes 1332 acres, and contains all of the necessary building material. Geo. M. Coffin, 49 Wall street, New York, will give further particulars.

Going to South Africa.—The Burt Manufacturing Co. of Akron, Ohio, has recently received an order from the De Beers Consolidated Mining Co., Ltd., of Kimberley, South Africa, for a very large Cross Oil Filter, to be used in its new power-house. Only American machinery will be used in this plant, and the Burt Company considers this a strong endorsement of its filter.

In Business for Himself.—Electrical manufacturers will be interested in knowing that Mr. W. Drummond Marrow, the well-known electrical engineer, has opened an office at Charlotte, N. C., and will be glad to represent manufacturers of electrical goods in this section of the country. Mr. Marrow was for several years general manager of the Standard Electric Co. of Danville, Va.

An Extensive Order.—The underground conduits being built by the Illinois Telephone Construction Co. of Chicago will require a large quantity of gravel and cement. The Garden City Sand Co., Security Building, Chicago, has been fortunate in making a contract to supply no less than 50,000 yards of gravel and 25,000 barrels of Portland cement, which will be used for concrete in the work referred to.

Extending Their Business.—Messrs. Frank Bros. of 66 and 68 Broad street, New York, have found it necessary to add a domestic department for the purchase and sale of new and second-hand machinery, railway supplies, electric equipment, etc. The company announces that the department will be in charge of Mr. R. B. Corbett, who has had a wide range of experience in this respect. The high reputation of this firm is a guarantee that the department will be conducted on up-to-date business principles.

Valuable Business Opportunity.—In another column will be found an opportunity to lease a corn and a flour mill located at Petersburg, Va. The flour mill is four stories high, has a capacity for 150 barrels daily, and is equipped throughout with a high grade of roller machinery. The corn mill has a capacity for 1000 bushels of meal daily, and is provided with both roller process machinery and stones. Excellent reasons are given for leasing the property, and particulars can be obtained by addressing the Cockade City Mills Co., Box 15, Petersburg, Va.

Hot-Water Packing.—After exhaustive tests, covering a period of two years, the H. W. Johns Manufacturing Co. of New York has placed on the market a packing to be used on plungers and rods of pumps delivering water at a temperature above 180 degrees F. In every test which has been made of this packing the results have been completely successful. The Kearsarge asbestos-metallic packings, produced by this company, are meeting with ever-widening favor, and the success of its entire line of packings offered for high-pressure and high-speed engines is sufficient guarantee of the value of any new packing which it may offer.

Orders of All Kinds.—Orders recently received by the York Manufacturing Co. of

York, Pa., show that its ice and refrigerating machinery is being shipped in quantities to all parts of the United States. Contracts made recently include plants for Ausbury Park, N. J.; Houston, Texas; Hammond, Ind.; Corinth, Miss.; Spokane, Wash.; Galveston, Texas; Winchester, Ky., and Lockhart, Texas. The Anheuser-Busch Brewing Association of St. Louis will install a 220-ton brine cooler, to be supplied by the York Company, while the Union Market Co. of Philadelphia has decided to equip its plant with a 50-ton can ice-making plant and piping, which will serve 170,000 cubic feet of space.

A Remarkable Improvement.—The Columbia Phonograph Co. has recently perfected a record mould of metal which promises to revolutionize the use of graphophones. Many attempts have been made to perfect a permanent mould, or "master record," as it is termed, from which duplicates could be reproduced at any time. It has remained for the Columbia Company, however, to achieve this success, and it is claimed that by the new method every record made is equal to the original. Consequently, it is possible for the singer, orator and musician to produce a record that can be transformed into metal capable of being preserved for an indefinite period. Thus the tones of a singer or speaker can be permanently preserved.

Popular in the South.—Some very strong testimonials have been received by the Keystone Lubricating Co. of Twentieth street and Allegheny avenue, Philadelphia, relative to its celebrated Keystone grease, which is now being widely used in the South. The chief engineer for Messrs. E. P. Burton & Co., extensive lumber manufacturers of Charleston, writes that the grease is giving perfect satisfaction in lubricating his engines, and believes it is the best and cheapest lubricator he has yet used. Mr. Frank B. Avery, the well-known engineer of Savannah, Ga., has been testing it in connection with the machinery of tugboats, and makes a similar statement. The Southern department of the Keystone Company is in charge of Mr. H. S. Chapman of Atlanta, who will be pleased to give inquirers any information desired.

TRADE LITERATURE.

Ready for Business.—The Carlin Machinery & Supply Co. of Allegheny, Pa., announces that it is ready for future business to any extent, and to emphasize this fact has issued an attractive card containing a photograph of a curly-headed youngster attired in overalls, with hammer in hand prepared for work.

Inductor Generators. — Electricians and others will be interested in knowing that Bulletin No. 123 of the S. K. C. System, published by the Stanley Electric Manufacturing Co. of Pittsfield, Mass., contains a treatise by Edward Heitmann on the inductor type of generators, reprinted with illustrations. It will be sent to anyone interested.

Direct-Current Generators.—Bulletin No. 102, issued by the Sprague Electric Co., is devoted to a description of the direct-current generators of the split-pole type, and, like its predecessors, is embellished with excellent illustrations, which give a very clear idea of the merits of the apparatus. The dimensions of the standard engine type of generators are included in the bulletin, which will be sent on application to the company at 527-531 West Thirty-fourth street, New York.

A Wide Circulation.—The vapor system of heating known as the Broomell has a very wide circulation in the buildings where it is installed, as those who have adopted it are well aware. It may be added that its popularity has become widespread also, as indicated by the range of contracts secured by the Vapor Heating Co. of York, Pa., which installs it. A recent catalogue issued by the company contains illustrations of residences and business blocks in a large number of cities heated by the Broomell system.

Little Specialties.—Small, but important, are the fixtures of refrigerator doors manufactured by P. J. Conroy, Seventy-fifth street and Island road, Philadelphia. The Conroy automatic refrigerator door fasteners and locks have secured a high reputation with the trade, and are used very extensively by manufacturers throughout the country. In addition, a line of hinges, faucets, railholders and door-pulls are manufactured by this concern, and are illustrated and described in a pamphlet recently published.

Modern Textile Equipment.—The circular describing the spooling of yarn recently published by the Draper Company of Hopedale, Mass., will deeply interest the trade, for the reason that it gives a clear idea of the modern improvements which have been made in machinery for this purpose. The high grade of equipment manufactured by the Draper Company is too well known to need comment. The spooler which it has perfected represents a combination of advantages, and the various parts are illustrated as well as described.

Valuable Information.—The book recently published by R. D. Wood & Co. of Philadelphia relative to gas and water-works appliances and pumping machinery cannot be called a pamphlet in the ordinary sense of the word. It is really a work which should form a part of the modern technical library, as it contains a mass of valuable statistics relative to the subjects referred to. Especially valuable are the sections devoted to the electrolysis of cast-iron pipe, steam pumping engines, centrifugal pumps and the commercial value of diameters of cast-iron pipe. These topics, however, represent but a few of the interesting features of the book. Incidentally it contains references to the equipment for which this firm has such a high and deserved reputation.

Important to Manufacturers.—An announcement of unusual importance is made in the advertising columns relative to the Merrimack Woolen Mills of Lowell, Mass. This plant is widely known as one of the oldest and most important textile industries in the United States; in fact, it is prominently identified with the industrial development of New England. Having the advantage of excellent water-power, its success has been remarkable, and the majority of its owners have profited by it. The board of directors of the proprietary company have decided to sell the plant at auction on December 19, Messrs. J. E. Conant & Co., the well-known auctioneers of Lowell, having charge of the sale. The plant is in excellent condition, equipped with good machinery, and is what is known as a 20-set mill for spinning coarse or fine woolen fabrics. It has a national reputation for the high grades it has manufactured in dress goods, cassimeres, cheviots and cloakings, including golf cloths, carriage cloths, beavers, kerseys and shawls. The mill has been kept in excellent repair, and the report of experts shows that its water-power is one of the best in the country. It could be used for other purposes if desired, owing to the combination of advantages which it possesses. A catalogue containing a full description of the plant will be sent to anyone interested on application to Messrs. Conant & Co.

The assessed value of property in Tennessee is $342,644,393, an increase since 1900 of $2,285,245. Davidson county leads, with an assesed valuation of $51,176,580, and Shelby is second, with $43,546,926.

Florida ranks sixth in the United States as a manufacturer of cigars, the total output during the last fiscal year having been 180,727,583.

The Charleston Exposition—Reduced Rates via Pennsylvania Railroad.

During the continuance of the South Carolina, Interstate and West Indian Exposition, to be held at Charleston, S. C., from December 1 to June 1, the Pennsylvania Railroad Co. will sell excursion tickets to Charleston and return from all points on its line at reduced rates. These tickets will be sold daily from November 30 to May 31, and will be of two descriptions: Season tickets, bearing a final limit of June 3, 1902, and 11-day tickets, good to return within eleven days, including date of sale, but not good after June 3, 1902. These tickets will not be good to stop off en route. For rates and further particulars apply to ticket agents.

Pennsylvania Railroad Co. Will Issue Clerical Orders for 1902.

The Pennsylvania Railroad Co. announces that clerical orders will be issued for the year 1902 to ordained clergymen having regular charge of churches located on or near the line of its road.

Application blanks may be obtained of ticket agents, and same should reach the general office by December 21, so that orders may be mailed December 31 to clergymen entitled to receive them. Orders will be issued only on individual application of clergymen when made on blanks furnished by the company and certified to by one of its agents. †

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Southern State Finances.

Mr. John G. Dew, second auditor of Virginia, is much gratified at the financial condition of Virginia revealed in the operations of his office during the past fiscal year. He points out that in spite of the expenses of an extra session of the general assembly and of the constitutional convention, still in session, in addition to those of the regular session of the general assembly, already provided for, the public debt has been reduced by $435,500 and $68,800 worth of State bonds have been bought for the literary fund. The amount of bonds now held by the sinking fund commissioners is $1,111,500, a gain of $505,518 over 1900.

Since the funding act of 1899 went into effect the State funding board of Tennessee has bought and cancelled bonds to the amount of $597,400, and has taken up $850,000 of floating debt. The bonded indebtedness of the State is now $13,120,800.

A dispatch from Tallahassee states that all of the Florida State bonds issued in 1871 have been retired, and that two years hence all of the 6 per cent. bonds issued in 1873 will likewise be retired and refunded. This will put Florida's bonded indebtedness on a basis really lower than 3 per cent., as her bonds are quoted above par.

New Corporations.

The Bank of Chipley, Ga., has been authorized to begin business with $25,000 capital by the State authorities.

A. H. Brown and others have formed the Brown Bond & Stock Co. at St. Louis, with $25,000 capital stock.

According to a dispatch from Weston, W. Va., Andrew Edmiston and others are interested in organizing a bank in that town.

A. T. Townes and others are interested in the Crystal Springs Bank, recently organized at Crystal Springs, Miss., with $20,000 capital stock.

Irwin Tucker of Newport News has been elected vice-president of the savings bank recently organized in that city with $25,000 capital stock.

E. B. White of Leesburg, Va., is interested in a national bank which it is proposed to organize at Warrenton, Va., with $150,000 capital stock.

The People's Savings Bank, recently organized at Clanton, Ala., has begun business with W. E. Holloway, president, and A. E. Matthews, vice-president.

A dispatch from Gulfport, Miss., is to the effect that J. T. Jones is interested in the national bank being organized in that town with $100,000 capital stock.

Arrangements have been made to open a bank at Mertens, Texas, with $10,000 capital stock. Among those interested are H. N. Tinker of Brandon and H. L. Smith of Hillsboro, Texas.

It is announced that the German-American Trust Co., being organized at St. Louis, Mo., will have a capital and surplus of $2,000,000, and will begin business about January 31. Among those interested are F. W. Biebinger and C. F. Blanke of St. Louis.

The Southern Trust & Deposit Co., organized in Baltimore, has begun business with $100,000 capital stock and $20,000 surplus. The company has secured the building formerly occupied by the American National Bank, and has elected Edward J. Bond, president, and John Sherman, vice-president.

TABLE OF CONTENTS.

EDITORIAL: Page.
A Reform Demanded.... 349
A Twentieth Anniversary Publication.. 349
To Educate Southern White Boys.... 349
The Good Roads Campaign.... 349
Electric Energy from Oil.... 350
Galveston.... 350
Sugar and Cuba.... 350
The Negro—The Worker.... 350
The Appalachian Park.... 350
Better Let It Sleep.... 350
Mississippi Industries.... 350

Gas Plant Wanted.... 350
To Unearth Buried Talents.... 351
Progress at Southern Ports:
X—Galveston.... 351
What Cuba Can Do for the South.... 353
Negro Migration and Industry.... 354
Arkansas Granite.... 355
Substantial Poetry.... 356
The Beaumont Oil Field.... 356
Oil for World's Fair Fuel.... 356
More Tank Steamships.... 356
Oil Notes.... 356
West Virginia Notes.... 356
Industries at New Orleans.... 356
New Orleans' Trade.... 357
Surprised the Trade.... 357
Texas Asphalt.... 357
The Appalachian Forest Reserve.... 357
To Work for Industries.... 358
Novel Irrigation Plan.... 358
Another Shipyard.... 358
Texas Nearly a Billionaire.... 358
Southern Asbestos.... 358

RAILROADS:
Terminals at Washington.... 358
Mr. Gould in New Orleans.... 358
To Be Built at Once.... 358
Order from the Pennsylvania.... 358
Electric Line in Florida.... 358
Contracts for Terminals.... 358
Decatur to Jasper.... 358
Railroad Notes.... 358

TEXTILES:
Georgia's New Cotton.... 358
Cotton Estimates.... 358
The Cotton Movement.... 358
Gainesville Cotton Mill.... 359
$100,000 Mill for Demopolis, Ala.... 359
To Add 4000 Spindles.... 359
Textile Notes.... 359
Quotations of Cotton Yarns.... 359
Immigration for the Southwest.... 359

COTTONSEED OIL:
Cottonseed Machinery Wanted.... 359
Cottonseed-Oil Notes.... 359

MECHANICAL:
No. 10 New Double Tenoner (Illus.).... 360
Molding Concrete Walls (Illus.).... 360
Improved Pumping Engine (Illus.).... 360
A Useful Ornament (Illus.).... 360
A Company That Buys Cities.... 360

LUMBER:
Lumber Market Reviews:
Baltimore.... 361
Norfolk.... 361
Savannah.... 361
Mobile.... 361
Beaumont.... 361
Lumber Notes.... 361

PHOSPHATES:
Phosphate Markets.... 362
Phosphate and Fertilizer Notes.... 362

CONSTRUCTION DEPARTMENT:
New Enterprises.... 363
Building Notes.... 365
Railroad Construction.... 366
Machinery Wanted.... 367
Trade Notes.... 367
Trade Literature.... 368

FINANCIAL NEWS:
Southern State Finances.... 368
New Corporations.... 368
New Securities.... 368

New Securities.

The town of Gloster, Miss., has sold the issue of $23,000 improvement bonds to the Bank of Gloster at par.

The National Telephone Co. of Wheeling, W. Va., has given a deed of trust to secure a bond issue to the extent of $50,000.

Wm. N. Nowell of Cameron, W. Va., has purchased the issue of $7000 in 6 per cent. improvement bonds of this town at 108.714.

It is announced that Seasongood & Mayer of Cincinnati have purchased the issue of $200,000 in 4½ per cent. bonds of Durham, N. C.

It is reported that the Merchants' Loan & Trust Co. of Chicago has purchased the issue of $180,000 in 4 per cent. bonds of Logan county, Kentucky.

Messrs. Seasongood & Mayer of Cincinnati have purchased the issue of $10,000 in 5 per cent. bridge bonds of Jackson county, Mississippi, at 103.666.

The First National Bank of Barnesville, Ga., has purchased the issue of $5000 in 6 per cent. bonds of the town of Douglas, Ga., paying 106.20 and interest.

Bids will be received until December 23 by the commissioners of finance of Baltimore for the issue of $1,000,000 in 3½ per cent. securities of what is known as the Western Maryland refunding loan. David Ambach, president of the board, may be addressed.

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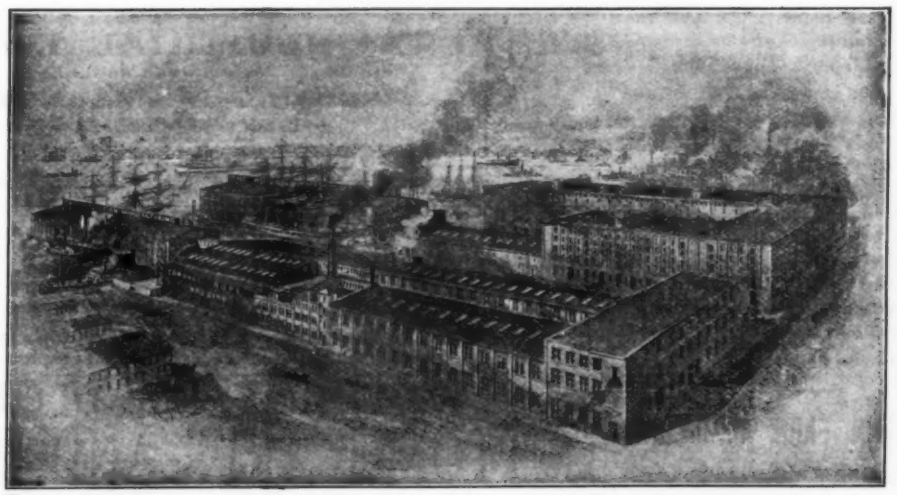

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Interest will commence January 1st, 1902, and the stock will be deliverable the following day.

This stock is issued by virtue of Ordinance No. 18, approved March 9th, 1898 (amended by Ordinance No. 32, approved February 8th, 1900), authorizing the issue of $1 000,000 of stock for the purpose of paying to the holders thereof the Western Maryland Railroad 6% 1902 loan, amounting to $1.000,000, issued by the Mayor and City Council of Baltimore and maturing January 1st, 1902.

The city does not tax its own issues of stock and will pay the tax imposed on this issue by the State of Maryland in place of the holders thereof.

Proposals must be sealed and addressed to David Ambach, President of Commissioners of Finance, and marked "Proposals for W. M. R. R., 1952 Refunding Loan."

The right is reserved to reject any and all bids.

DAVID AMBACH,
President Commissioners of Finance.

J. SEWELL THOMAS,
Clerk Commissioners of Finance.

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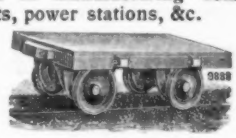

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ALPHABETICAL INDEX OF ADVERTISERS.

Ads. marked * appear every other week. Ads. marked † appear in first issue of the month. Ads. marked ‡ not in this issue.

For CLASSIFIED INDEX See Pages 3, 5, 7, 9, 11, 13, 15 and 17.

A

Abrasive Material Co. 37
A. C 32
Acme Photo-Engraving Co. 49
Acorn Brass Works 53
Adams, Henry 6
Adams, J. M. 11
Adams Laundry Machinery Co. 2
Ady, Sam'l J 30
Affleck, Geo. E. ‡
Aitchison, Robt., Perf. Met. Co. 39
Alabama Con. Coal & Iron Co. 8
Alabama Iron Works 44
Alber & Bryne 6
Albro-Clem Elevator Co. 52
Alexander Bros 24
Alexander, S. B., Jr., Co. 55
Allington & Curtis Mfg. Co. 56
Alpha Photo-Engraving Co. 49
Alsing, J. R., Co 38
American 48
American Arithmometer Co 9
American Blower Co 17
American Bridge Co †
American Cement Co. 8
American Cotton Oil Co. 48
Amer. Cor. School of Textiles †
American Diam'd Rock Drill Co. 39
Amer. Elec. Sup. & Mfg. Co. 34
American Frog & Switch Co. 13
American Injector Co. 3
American Iron & Steel Mfg. Co. 10
American Locomotive Co 13
American Mfg. Co. 27
American Sheet Steel Co. 26
American Ship Windlass Co. 20
American Spiral Pipe Works 51
American Steam Gauge & Valve Mfg. Co. 23
American Steel Hoop Co. 5
American Supply Co 47
American Tool Works Co. 36
American Type Founders Co. 53
Andrews, Perry, & Bro 50
Arctic Machine Co 23
Armitage Mfg. Co. 43
Armstrong, R. S., & Bro. 34
Asphalt Ready Roofing Co. 43
Associated Expanded Metal Co †
Atherton Machine Co., The A. T. 48
Atkins, E. C., & Co 44
Atlantic Transport Co. 49
Atlas Engine Works 14
Atlas Pipe Wrench Co. 10
Atwell Machinery Co. 32
Audit Co. of New York 28
Aultman Co. 12
Austin, F. C., Mfg. Co 38
Austin Separator Co. 19

B

Babcock & Wilcox Co. 18
Bacon Air Lift Co. 50
Badger, E. B., & Sons Co 49
Baeder, Adamson & Co. 37
Baer, Richard P., & Co 44
Bailey-Lebby Co 40
Bailey, John T., & Co. 26
Baird, U., Machinery Co. 32
Baker, H. C., & Co 32
Baker, Edgar & Co. 27
Balderston, H., & Son. 41
Baldwin Locomotive Works. 13
Ball Engine Co. 14
Ball & Wood Co. *
Baltimore Engraving Co. 49
Baltimore & Ohio R. R. 49
Baltimore Steam Packet Co. 49
Barber, A. H., Mfg. Co. 22
Barnes, W. F., & John, Co. 36
Barnett, G. & H., Co. 56
Barrett Mfg. Co. 26
Bartlett, Hayward & Co. 42
Bates, James, Sons. 53
Beach, H. W 45
Beardsley Gravity Dam & Con. Co 50
Beaumont Trust Co. 30
Belmont Iron Works 7
Benjamin Iron & Steel Co 34
Berryman, James *
Bertsch & Co. ‡
Besly, C. H., & Co. 56
Bickford Drill & Tool Co. 36
Bird, J. A., & W., & Co. 40, 42
Birmingham Boiler Works 16
Birmingham Rail & Loc. Co. 35
Blakeslee Mfg. Co. 21
Blanton, Jr., E. A 40
Bloomer, F 34
Blythe, Richard A 28
Boggs, E. B 33
Boggs, J. S 53
Bolles, J. E., Iron & Wire Wks. 41
Bonar, James, & Co. 14
Bonneville Portland Cement Co. 8
Boomer & Boschert Press Co. 28
Bostedo Pneumatic Tube Co. 48
Boston & Maine Railroad 49
Boston Belting Co 24
Boston Blower Co 35
Bourse, The 14
Bowen, Jos. E 34
Bowser, S. F., & Co. 56
Bowsher, N. P., Co *
Box 50 30
Bradley Pulverizer Co. 39
Bradstreet Mercantile Agency 35
Brobston, Fendig & Co. 30
Broomell, Schmidt & Co., Ltd. †
Brown, A. & F., Co. 38
Brownell, The, & Co. 17
Buckeye Iron & Brass Works. 48
Buckingham & Paulson 28
Buffalo Forge Co 56
Builders' Iron Foundry ‡
Burnam Grate Co 18
Burns, J. R 30
Burrowes, E. T., Co. 3
Burt Mfg. Co. 3
Bushnell, G. H., Press Co. 48
Bushong, M. M. 41
Byers, John F., Machine Co. 16

C

Caine & Plitt 34
Caldwell, E. R., & Co. 33
Caldwell H. W., & Son Co. 4
Caldwell, W. E., Co. 10
Callahan, Geo., & Co 23
Cameron, A. S., S. Pump Wks. 50
Cameron & Barkley Co 39
Camp Engineering Co. 33
Campbell & Clute †
Carbondale Chemical Co. 23
Carborundum Co 37
Cardwell Machine Co 46
Carlin Machinery & Supply Co. 32
Carnell, George 40
Carolina Fire Brick Works 40
Carolina Portland Cement Co. 3
Caroline Iron Works 39
Carpenter, George B., & Co 52
Carver Cotton Gin Co. 46
Cary Spring Works 12
Case Mfg. Co. 16
Casey, D. L., Machine Co. 33
Castner, Curran & Bullitt 8
Catlett, Charles. 26
Cedartown Co 30
Challenge Tube Cleaner Co. 19
Chapman, W. A., & Co 6
Charlotte Roof & Paving Co. 41
Chase Pulley Co. 21
Chattanooga Machinery Co. 45
Chattanooga Paint Co. 41
Chesapeake Electric Co. 55
Chesapeake Steamship Co. 49
Chester Steel Castings Co. 12
Chicago House Wrecking Co. 33
Childs, O. J., Co †
Cin., Hamilton & Dayton R.R. 48
Clarendon Boiler Works 10
Clayton Air Compressor Works. 8
Cleveland Belting & Mch'y. Co. 33
Cleveland, Lorain & Wheel'g Ry. 49
Cleveland Term. & Valley R. R. 49
Cliff & Guibert Co 35
Climax Mfg. Co 13
Cochran Co 23
Cockade City Mills 30
Codd, E. J., Co 33
Coe Mfg. Co. 44
Coffin, George M 30
Coggins & MacBride 17
Cohoes Iron Foundry & Mch. Co. †
Collier & Brown 6
Colonial Paint & Varnish Co. 43
Columbia Bridge Co. 6
Columbia Phonograph Co 25
Columbia Refining Co 42
Columbus Machine Co. 17
Columbus Machinery Co 48
Commercial Electric Co. 54
Conant, J. E., & Co. 31
Conard, Thos. P 32
Continental Trust Co. 27
Contractors' Plant Mfg. Co., Ltd. 16
Cook's, Adam, Sons 25
Cook Well Co 50
Corder, Edward 28
Cordesman, Meyer & Co. 44
Cortright Metal Roofing Co. 43
Cotton Oil & Fibre Co. 48
Covert Mfg. Co 4
Cox, Justice, Jr., & Co., Ltd. 34
Cramer, Stuart W 28
Cresson, Geo. V., Co 38
Crippen, H. D 39
Crocker-Wheeler Co 54
Crooked Fork Coal & Coke Co. *
Crosby Steam Gage & Valve Co. 5
Crown Dryer Co 40
Crutchfield, J. H 48
Curran, Jas. H., Elevator Co. 53
Cutler Mfg. Co. 56
Cypress Lumber Co. 10, 34

D

Dallett & Co *
Dart, E M., Manufacturing Co. 20
Davis Coal & Coke Co. 8
Davis, F. H., & Co. 33
Davis, G. M., & Son 10
Davis, John 33
Davis, W. P., Machine Co. ‡
Dawson, A. L., & Co. 33
Day, J. H., Co 32
Dean Bros. Steam Pump Works. 50
Dehner-Wuerpel Mill Bldg. Co. 25
Delaware Trust Co 28
Delgado Mills 33
De Loach Mill Mfg. Co 45
De Ronde, Frank S., Co. 43
Detroit Graphite Mfg. Co. 26
Detroit Lubricator Co. 19
Diamond Machine Co. 56
Dibble, S 30
Dietz, R. E. 53
Dimmick Pipe Co. 51
Dixon, Jos., Crucible Co. 56
Dopp, H. Wm., & Son 10
Dow Wire Works Co. 41
Dowman Mfg. Co. 42
Downie Pump Co 50
Draper Co. 46
Dufur & Co 41
Dunning, W. D 28
Dupont Mfg. Co. 37

E

E. A. H., Box 26 31
Eastern Granite Roofing Co. 42
Eaton & Prince Co. 52
Eckbold's, Wm., Sons 32
Edson Mfg. Co. 50
Electrical Material Co. 15, 31, 55
Electric Supply Co. 54
Emmert Mfg. Co. †
Erie Pump and Engine Co. 50
Erikson, Edward E. 6
Etting, Edward J 7
Eureka Fire Hose Co. 24
Eureka Supply Co. 41
Excelsior Knitting Mch. Mfg. Co. 47
Exeter Machine Works 52
Exeter Machine Works 23

F

Fairbanks Co 18
Fairmont Coal Co 34
Fairmount Machine Co. 46
Farquhar, A. B., Co., Limited 17
Faunt Le Roy & Co. 53
Fay, J. A., & Egan Co. 44
Fayerweather & Ladew, Inc. 24
Felton, S. A., & Son Co 6
Fernholtz Brick Mchy. Co. 40
Finished Steel Co. 21
Fitz-Hugh & Co. 34
Flint & Walling Mfg. Co. 51
Foos Mfg. Co. 38
Fox, M. Ewing, & Co 42
Frank Machinery Co. 44
Freese, E. M., & Co. 41
French, A., Spring Co. *
French, Sam'l. H., & Co. 8
Frick Co 22
Froehling, Dr. Henry 6

G

Galena Oil Co. 26
Galt, John, & Sons 42
Gandy Belting Co. 24
Gardner Governor Co 51
Garden City Sand Co 8
Garfield Paint Co 43
Garrett, C. S., & Son 43
Gem City Boiler Co 18
General Electric Co. 54
General Fire Extinguisher Co. 6
Gen'l Incandescent Arc Light Co. 54
Genuine Bangor Slate Co. 12
George Foundry & Mach. Wks. 41
Gibbes, W. H., & Co. 47
Gilbert, C. M., & Co. 8
Girard Boiler & Mfg. Co. 10
Given, Wm. M 6
Glamorgan Pipe & Foundry Co. 50
Golden's Foundry & Mach. Co. 20
Goodsell Packing Co. 50
Gould, F. M. 50
Grant & Williams 32
Greaves, Klusman & Co. †
Green Fuel Economizer Co. 18
Green, E. S 28
Greenwald, I. & E., Co. 20
Guarantee Electric Co. 33
Gulf Cypress Lumber & Tank Co 10

H

Haines, William S., Co. 4
Hall, Chas. A. 6
Hallam, Wirt W 45
Hambleton & Co 27
Hammond Iron Works 18
Hanlon, Thos. F 28
Hanson & Van Winkle Co. 55
Hardie-Tynes Fdy. & Mch. Co. 15
Harrington & King Perf. Co. 4
Harris, C. C 33
Harrisburg Fdy. & Mach. Wks. 15
Harrison Safety Boiler Wks. 19
Harry Bros. Co 10
Hartford Steam Boiler Inspection & Insurance Co 14
Hartley's Boiler Works 18
Hartranft, Wm. G., Cement Co. 3
Haskell-Dawes Mch. Co. †
Hay-Budden Mfg. Co 36
Hazard Mfg. Co. 52
Hazelton Boiler Co. 18
Healy Ice Machine Co. 22
Heine Safety Boiler Co. 18
Help Wanted 35
Hench & Dromgold 45
Hendrick Mfg. Co., Ltd. 39
Henning, John, & Son. 32
Hicks, F. M 34
Hiertz, Theo., & Son 3
Higgins, John C., & Son. 25
High Point Machine Works 17
Hill, Wm. E., & Co 19
Hill & Griffith Co 2
Holt, S. L., & Co 33
Holt & Bullington 42
Hoopes & Townsend Co. 12
Hornaday, J. P 28
Houston & Liggett 53
Hughes Specialty Well Drill. Co 6
Humboldt Metal Works 12
Hunt, C. W., Co 28
Hutchinson Bros 45
Huther Bros †
Hutton Engineering Co. 6
Hyde Bros. & Co 34

I

Imperial Gas Lamp Co 53
Incandescent Electric Light Manipulator Co. 53
India Alkali Works 47
Industrial Water Co. 47
Ingersoll-Sergeant Drill Co. 26
Ingoldsby Automatic Car Co. 13
International Boiler Comp'd Co. *
International Corres. Schools. 6
International Power Co 16
International Sprinkler Co. 14
International Trust Co. 27

J

Jackson Mfg. Co. 2
Jacobs, M. R. 28
Jacobson Machine Mfg. Co. 21
Jacoby, W. F., & Co. 8
Jeffrey Mfg. Co. 39
Jenks, W. H. 54
Jenkins Bros 56
Jewell Water Still Co. 4
Johns, H. W., Mfg. Co. 7
Johnson, John, & Co. 48
Jones, J. B., & Co 34
Joseph, Isaac, Iron Co. 34

K

Keasbey & Mattison Co. 26
Keeler, E., Co 14
Kelley, Benj. F., & Son. 14, 33
Kelley Island Lime & Transport Co. 8
Kelly, O. S., Co 39
Kendall & Flick 12
Kennedy, Walter 6
Kennicott Water Softener Co. 22
Kentucky Electrical Co. 55
Kilbourne & Jacobs Mfg. Co. 2
Kilburn, Lincoln & Co 46
Kilby Locomotive & Mach. Wks. 34
King, W. W 28
Kirk, W. W. 33
Kitson Hydro-Carbon Heating & Incandescent Lighting Co. 55
Klauder-Weldon Dye'g Mch. Co. 46

L

Landis Banking Co. 27
Landis Tool Co †
Lane Mfg. Co 44
Lang, S. Logan 30
Latrobe Steel & Coupler Co. 12
Latrobe Steel Co. 12
Lederle, Frank 6
Leffel, James, & Co. 51
Leffler, Chas., & Co 37
Lehman, Charles T. 33
Lewis, H. F., & Co., Ltd 10
Lexow, Theodor 39
Lidgerwood Mfg. Co. 16
Link-Belt Engineering Co. 53
Litharge Paint Co 42
Lockwood, Greene & Co. 6
Logan, A. W 34
Lombard Iron Wks. & Sup. Co. 17
Long & Allstatter Co 37
Loomis & Nyman 50
Lowell Machine Shop 46
Ludlow-Saylor Wire Co. 40
Ludlow Valve Mfg. Co 22
Lunkenheimer Co 23
Lykes, John D. 3

M

Macomber & Whyte Rope Co. 52
MacRae, Hugh, & Co 27
Magid, Louis B., & Co 28
Main Belting Co. 24
Makepeace, C. R., & Co. 6
Males Co 34
Mallory, J. D 33
Maltby-Hornaday Co 28
Marine Iron Works 7
Marion Steam Shovel Co. 2
Marrow, W. Drummond 6
Maryland Casualty Co. 19
Maryland Cement Co 8
Maryland Foundry & Mach. Co. 52
Maryland Trust Co. 27
Mason Machine Works 46
Mason Regulator Co 50
Masury, John W., & Sons 42
May & Spalding 34
Mayo Knit. Mch. & Needle Co. 46
McCabe, J. J 37
McClave, Brooks & Co. 16
McClave, Hamilton & Rimmer. 17
McDonald Bros *
McCollugh Iron Co 33
McGowan, John H., & Co. 50
McIntosh, Seymour & Co. 16
McKee, John T 34
McKenna, David †
McKiernan Drill Co. 39
McLanahan-Stone Machine Co. 39
McMichael & Wildman Mfg. Co. 46
McMillan Bros 7
Means & Fulton Iron Works 22
Mecklenburg Iron Works 16
Meier's, Joseph, Sons 24
Mengel's Machinery Exchange. 33
Mercantile Trust & Deposit Co. 27
Merchant & Co ‡
Merchants & Farmers' Nat. Bk. 27
Merchants & Miners' Trans. Co. 49
Meyers, The Fred. J., Mfg. Co. 41
M. F 32
Middendorf, J. Wm., & Co. 27
Middleton, J. W 2
Mietz, A 17
Milburn, Frank P 6
Miles, Franklin S 3
Millett Core Oven Co 12
Milner & Kettig Co 35
Milton Mfg. Co 17
Minnigerode, Wm 34
Mobile Coal Co 8
Monitor Steam Generator Mfg. Co 19
Montross Metal Shingle Co. 42
Morrison & Kindervater 6
Morse Twist Drill & Mch. Co. 12
Morse, Williams & Co. 52
Mottu, DeWitt, & Co. 28
M. S 32
Mueller, H., Mfg. Co 2
Mundt, Chas., & Sons 40
Muralo Co 43
Murray Iron Works 17
Muzzy Bros 43
Myers, F. E., & Bro 50

N

Nanz, B., & Co. 12
Nashville, Chattanooga & St. Louis Railway 30
National Electrical Supply Co. 32
National Pipe Bending Co. 19
National Promot. & Audit. Co. 27
National Roofing Supply Co. 43
National Roofing & Supply Co. 43
Nat'l Skylight & Construction Co 41
New Atlantic Hotel 10
New England Automatic Weighing Machine Co. 48
Newhall, Henry B. 47
N. J. Car Spring & Rub. Co. 24
N. J. Foundry & Mach. Co. *
N. J. Wire Cloth Co. 41
N. J. Zinc Co 42
N. Orleans Wood Preserving Wks 45
Newport News Shipbuilding & Dry Dock Co 17
New Process Raw-Hide Co 21
New St. Charles Hotel 28
New York Continental Jewell Filtration Co 2
New York Equipment Co. 35
Niagara Mach. & Tool Works *
Nichol, T. W *
Nicholson File Co 26
Niles-Bement-Pond Co. *
Noland, Wm. C. 30
Nordyke & Marmon Co. 2
Norfolk & Western Railway 31
North American Metaline Co. 21
Northern Electrical Mfg. Co. 8
Norton Emery Wheel Co. 5
Norway Iron and Steel Co. 12
Nuttal, R. D., Co 21
Nye & Tredick 47

O

Obermayer, S., Co. 11
Ohio Injector Co. 19
Ohio Pulley Co 21
Old Dominion Land Co 56
Olds Motor Works 17
Otto Gas Engine Works *

P

Pancoast International Ventilator Co. 42
Paradox Machinery Co. 33
Park Mfg. Co. 53
Parkhurst Bros. & Co. 53
Patterson, Frank L. 32
Peacock Iron Works 38
Pease, F. M., Incorporated 34
Pechin, T. E. 25
Peck-Hammond Co. *
Peerless Rubber Mfg. Co. 18
Penberthy Injector Co. 56
Perry, Nathaniel V 6
Petroleum Iron Works Co. 18
Philadelphia Textile Specialty Machine Co. 47
Phoenix Iron Works Co. 17
Phos. Bronze Smelting Co., Ltd. *
Pinetown Paint & Chemical Co 43
Pittsburg Meter Co 56
Pittsburg Rubber & Leather Co 24
Plaut 28
Pleuger & Henger 11
Polk, A. J., & Son †
Pomona Terra Cotta Co. 50
Power Specialty Co. 19
Porter, H. K., Co 13
Poulterer & Co 32
Powhatan Clay Mfg. Co. 3
Praray, C. A. M., & Co 6
Pratt & Boltwood 6
Pratt & Whitney Co. 36
Pratt, N. P., Laboratory 6
Prentiss Tool & Supply Co. 32
Price Machinery Co 33
Price & Co 44
Price & Heald 48
Pulsometer Steam Pump Co. 50

Q

Queen City Printing Ink Co. 49

R

Railways & Light Co. of America 27
Rand Drill Co 39
Ransome & Smith Co 8
Raymond Bros. Impact Pulv. Co. 45
Rechtin, Louis E., & Bro. 33
Record Printing House 37
Reese-Hammond Firebrick Co. 8
Reid, Thorburn 6
Reliance Gauge Column Co 22
Remington Machine Co. 22
Rhoads, J. E., & Sons 24
Richards, A. E 28
Richmond Stove Co. 19
Richmond Trust & Deposit Co. 27
Ridgway Dynamo & Engine Co. 54
Rieman, Howard 33
Risdon-Alcott Turbine Co. 51
Roanoke Navigation & Water-Power Co. 30
Robbins, O. A 46
Robertson, Jas., Mfg. Co. 39
Robinson, Geo. A. Contracting Co. 43
Robinson, J. M., & Co. 37
Robinson Machine Co. 16
Robinson, Wm. C., & Son. 23
Robinson & Orr 34
Rockwell Engineering Co 6
Roebling's, John A., Sons Co. 26
Rogers, J. M., Boat, Gage & Drill Wks 36, 39
Root, B. M 45
Rossendale-Reddaway Belting & Hose Co 24
Rossiter, MacGovern & Co 32
Ross-Meehan Foundry Co. 12
Royersford Fdy. & Mach. Co. 37
Rubber Tire Co 9
Ruggles-Coles Engineering Co. 8
Ryan, J. J., & Co. 12

S

Sabel, M. & Sons 35
Safety Car Heating & Light. Co. 4
Saginaw Mfg. Co. 21
Salem Iron Works 45
Salem Machine Works 37
Saunders', D., Sons 11
Sawyer, H. M 30
Sayre, C. E 30
Saxton, J. C 33
Scaife, W. B., & Sons 6
Schaefer, W. J., & Co. 5
Schieren, Chas. A., & Co. 24
Schofield's, J. S., Sons Co. 18
Schrieber, L., & Sons Co. 11
Schumacher & Boye 33
Scott, Low & Co. 34
Scott & Williams 46
Scranton Cor. & Eme'y Wheel Co. 37
Seyfert's, L. F., Sons 33
Shelby Electric Co. 54
Sherwood Bobbin & Mfg. Co. 48
Shimer, Saml. J., & Sons 45
Shultz Belting Co 56
Siegrist Lubricator Co. 19
Simmons, John, Co. 10
Simpson, A. Duncan 6
Simpson Mfg. Co 39
Sinclair, S. H., Co. 2
Singer Automatic Ice Mch. Co. 22
Situation Wanted 35
Skinner Chuck Co 37
Smethurst & Allen 55
Smidth, F. L., Co. 38
Smith-Courtney Co. 17
Smith, H. B., Machine Co. 45
Smith, Samuel J., & Co 54
Smith, S. Morgan, Co. 51
Snyder, H. P., Mfg. Co †
Soule Steam Feed Works *
Southeastern Lime & Cement Co. 8
Southern Engine & Boiler Wks. 18
Southern Industrial Co. 28
Southern Iron & Equipment Co. 34
Southern Railway Co. 31
Southwark Fdy. & Mch. Co. 15
Spartanburg Loom Harness Co. 46
Speidel, J. G 53
Speir, W. E 6
Spencer & Hall 53
Sprague Electric Co. 54
Sprout, Waldron & Co 25
Standard Caster & Wheel Co. 56
Standard Paint Co. 41
Standard Pneumatic Tool Co. 45
Standard Scale & Sup. Co., Ltd. 4
Standard Traction Brake Co. 20
Stanley Electric Mfg. Co. 9
Star Brass Works 43
Starr, B. F., & Co 25
Steel Rail Supply Co. 34
Steele, J. C., & Sons 40
Sterling Blower & Pipe Mfg. Co. 35
Stevens', H., Sons Co 56
Stillwell-Bierce & Smith-Vaile Co. 14, 51
Stimpson, E. B., & Son. 7
St. Louis Iron & Machine Wks. 16
Stowell Mfg. Co 43
Struthers, Wells & Co. 17
Stuebner, G. L., Iron Works 14
Sturtevant, B. F., Co. 35
Sturtevant Mill Co. 39
Sullivan Machinery Co. 39
Sweet & Doyle 14

T

Tabor Mfg. Co. 4
Tanite Co 56
Tate, Jones & Co 23
Taunton Locomotive Mfg. Co. 14
Telephone Mfg. Co 35
Textile Mill Supply Co. 47
Thomas, J. Sewell 28
Thompson, T. C., & Bros 6
Thompson, Son & Co 33
Thomson, Edward H., & Sons 27
Thompson, P. H 20
Thropp, J. E 32
Titus, E. E 44
Tools 33
Toomey, Frank 34
Torbert & Peckham 35
Tower-Binford Elec. & Mfg. Co. 54
Trampe, Chas. F 33
Trask, Spencer, & Co 27
Trenton Iron Co 52
Trevor Mfg. Co. 45
Triumph Electric Co. 53

U

Union Iron Works Co. 35
United Telpherage Co. 52
University School for Boys 8
Upton, W. B., Co 6
U. S. Cast Iron Pipe & Fdy. Co. 51
U. S. Mineral Wool Co 42

V

Valk & Murdoch Iron Works 18
Valley Iron Works *
Vanderbilt & Hopkins 30
Van Noorden, E., Co. 7
Van Winkle, E., Gin & Mch. Wks. 47
Vapor Heating Co †
Vermont Farm Machinery Co. ‡
Victor Electric Co 53
Vilter Mfg. Co. 22
Virginia Bridge & Iron Co. 6
Vitrified Wheel Co. 37
Voorhees Rubber Mfg. Co *

W

Walker & Elliott 40
Wall, P., Mfg. Supply Co. 14
Wallace Supply Co *
Walter & Legare 6
Warner, Charles, Co. 8
Warren-Burnham Co 34
Warren Chemical & Mfg. Co. 43
Warren-Ehret Co 43
Washburn, A. H 46
Waters, John A., & Co 31
Watson, Benjamin 34
Watson, N. A ‡
Watson, R. E. 28, 30
Watson-Stillman Co. 48
Weber, F., Co. 7
Webster, Warren, & Co. *
Weir Frog Co 14
Wells Light Mfg. Co 10
West Pulverizing Machine Co. 39
W. Va. Central & Pittsburg Ry. 50
West Virginia Pulley Co. 21
Westbrooks, J. B., Fdy. & Mch. Co 53
Western Electrical Supply Co. 55
Westinghouse Air Brake Co. 20
Westinghouse, Church, Kerr & Co 20
Westinghouse Elec. & Mfg. Co. 20
Westinghouse Machine Co. 20
Wetherill, Robert, & Co. 14
Whaley, W. B. Smith, & Co. 6
Wheeler, McMichael & Co 6
Wheeling Board of Trade 30
Whitinsville Spinning Ring Co. *
Whitman Mfg. Co. 17
Whiton, D. E., Machinery Co. 7
Wickes Bros 32
Wilce, T., Co 44
Wilcox, D., Mfg. Co. 2
Williams Bros 50
Williams, E. O 33
Williams, I. B., & Sons 25
Williams, John L., & Sons 27
Williams, J. R., & Co. 56
Williams, Milton F., & Co. 21
Wilmarth & Morman 37
Wilson Laundry Machinery Co. 2
Wisconsin Mchy. Co. 33
Witherow, James P. 6
Wolf, The, Co 25
Wolf, Fred. W., Co. 22
Wood, R. D., & Co. 51
Woodrow 30
Woods, S. A., Machine Co. 44
Woods, T. B., Sons 21
Woolford, G., Wood Tank Mfg. Co 10
Wright Mfg. Co. 14
Wrightsville Hardware Co. 41

Y

York Safe & Lock Co. 7
York Mfg. Co. 22

Z

Zeinicker, Walter A. 8

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SAM'L J. ADY, Sharon, Md.

Water Powers and Mill Sites.

FOR SALE.

Finest undeveloped water-power and best Cotton Mill Site in Piedmont region of South Carolina. 1332 acres with fine timber, granite and all materials for building mill. Fall, with natural rock dam. Cotton grown on property. Splendid climate. Near two thriving towns. Ideal site for store on public road.

APPLY TO

GEORGE M. COFFIN,
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ROANOKE NAVIGATION & WATER POWER CO.

Weldon, North Carolina.

LESSORS OF

Water Power and Electric Power.

Unrivalled location for

INDUSTRIAL ENTERPRISES

at Junction of Atlantic Coast Line and Seaboard Air Line Railway Systems.
Steamboat connection with Norfolk, Va.
12 hours' travel from New York City.
Operates Nine Miles of Canals and Electric Power Transmission Plants.

Price for Water Power:

$15.00 Per H. P. Per Year,
24 Hours' Use Daily.
THIS INCLUDES BUILDING SITE.

Electrical Power;

$15.00 PER H. P. PER YEAR,
20 Hours' Daily Use.

OTHER INDUCEMENTS:

Proximity to Raw Material and Market Centres.
Favorable Rates for Manufactured Products.
Free Building Sites.
Low Taxes, Exemptions, etc., etc.
Correspondence Solicited.

JAS. W. WILSON, President.

Magnificent Site for Pulp Mill, &c.

On Seaboard Air Line and river navigable 40 miles for light draft boats into a timber country untouched by railroads. Over 200 horse power available.

Manufacturing Site of Twenty Acres and $20,000 worth of Building Lots.

To any industry employing not less than 300 men. Three trunk lines of railway with 1653 feet track frontage. Water works and good sewerage. Can furnish electric power in any amount, and the best manufacturing town in Northern Ohio. Thirty miles from lake ports and coal fields. Cheap freight rates. Low tax rate and all city advantages. Call on or address

J. R. BURNS, Owner,
Box 1049, Kent, Ohio.

WANTED.

Owners having Iron, Lead, Silver, Pyrites and Copper developed properties who desire to sell or associate capital. Limit $250,000.

WOODROW,
Care Manufacturers' Record.

FOR SALE.

Factory Sites with Cheap Electric Power. Also Direct Water Power.

Situated at junction of two main lines of railway, 25 miles from Richmond, Va.

Address **W. C. NOLAND,**
Chamber of Commerce Bldg., RICHMOND, VA.

To the Manufacturer:

No sites for **Cotton and Woolen Mills** are more attractive or valuable than those to be found on the

Nashville, Chattanooga & St. Louis Railway.

The water powers are superb; coal for fuel convenient and low in price; the cotton fields almost within sight and sound of the water powers, with low rates on cotton from the various cotton markets to the mill sites (ask for tariffs) and the labor abundant, efficient and cheap. No more healthful region exists in the United States than that penetrated by the system of the Nashville, Chattanooga & St. Louis Railway The water powers occur on numerous streams on the Huntsville & Sparta Division and on the Western & Atlantic Railroad and range in dynamic force from 500 to 12,000 horse powe s

The prices of steam coal at the mills vary from $1 00 to $1.75 per ton Labor is 25 per ct. cheaper than in the rigorous climate of the North, and finished goods may be transported to all markets, domestic and foreign, at rates as favorable as those accorded to other manufacturing districts in the United States. For descriptive pamphlets, maps rates, etc., call on or address

J. R. KILLEBREW,
Industrial and Immigration Agent,
NASHVILLE, TENN.

Valuable Water Power For Sale at a Bargain.

Forty-Two Acres of Land, lying on both sides Little River at Bordeaux, S. C., on the Charleston & Western Carolina R. R., containing a new Four Room Cottage and Out-Buildings and partially developed Water Power, is offered now for $5,000 cash. Just the site for a Yarn, Hosiery, Underwear or Cotton Mill. Available Power enough for a half-million dollar investment. Can be cheaply developed.

C. G. SAYRE, C. E., ABBEVILLE, S. C.

Miscellaneous Properties and Investment Opportunities.

FOR SALE.

Sash, Door and Blind Factory,

with Foundry and Machine Shops attached. Lot 200x200 ft. All buildings brick; main building 50 x165 ft.; office and storeroom 24x80 ft ; foundry 40x45 ft. Side track near freight and passenger stations. For particulars address

P. H. THOMPSON, Salisbury, N. C.

FOR RENT.

The well-established and fully-equipped Flour and Corn Mills, known as Cockade City Mills, located at Petersburg, Va., on the Appomattox River Canal, is hereby offered for rent.

The Flour Mill is a commodious four (4) story brick building, is equipped with the most approved Roller machinery of the E. P. Ellis manufacture, and has a capacity of 150 barrels per day.

The Corn Mill is also a large four-story brick building, and is furnished with both Roller Process and Stones, with a capacity of 1000 bushels meal per day.

The products of both of these mills enjoy a fine trade reputation, and meet with the readiest sale. Their brands are deservedly popular. The water-power supplying these mills is never too high nor too low in its habit, is truly both unlimited and unfailing, and the property, placed in the hands of a man of experience, offers the surest promise of success and substantial profit.

The present occupant releases the plant through no fault or want of confidence in its performance or capacity, nor with the reception accorded by the trade to its products, but is simply forced to relinquish it by reason of the tax upon his time of his other numerous and large business interests, which admit of no further additions thereto.

A good tenant can secure the property for a term of years upon satisfactory figures. This is a business opening seldom met with in a district so populous. Correspondence is invited.

COCKADE CITY MILLS CO.

P. O. Box 15. PETERSBURG, VA.

A Rare Bargain for the Right Man.

Will sell out fifth interest in a well-established sash, door and blind factory with an up-to-date 80-bbl. roller mill in connection; also 425 acres finest timbered land in Western N. C., with a saw and shingle mill on tract; just commenced cutting the timber. Business has been paying 20 per cent. cash dividend ever since started. Or would sell half or controlling interest. Puver to take charge and run business. Have two million feet lumber in yard with an abundant supply near factory. Best of reasons for selling. Address

Box 50, care Manufacturers' Record.

If you wish to keep posted on the progress of the South, read the Manufacturers' Record. Price $4 a year.

Towns Wanting Factories.

WHEELING, W. VA.

has advantages as a manufacturing point that cannot fail to interest you, if you contemplate the establishment of a new plant or the removal of your present one. CHEAP FUEL (Coal or Gas); LOW TAXES; LOW-PRICED SITES and UNSURPASSED SHIPPING FACILITIES are the attractive features. Has the idea ever struck you that the United States Steel Corporation should know the peculiar advantages of all sections of this country? They are expending more money to enlarge their plants located in the WHEELING DISTRICT than on all others combined. What does this signify?

The INDEPENDENT people have tumbled to it. Full details will be furnished upon application to the Secretary.

Wheeling Board of Trade, Wheeling, W. Va.

Cotton Mill Centre!

"Cedartown, Ga."

Another $100,000 Cotton Mill is announced for establishment at "CEDARTOWN, GA." This town is rapidly growing as a Textile Centre and new plants are constantly being built here. The product of the latest mill will be fine numbers of hosiery yarn.

Cotton and Knitting Mills, Stove Works, Machine Shops, Basket Factories, Agricultural Implement Works, Stores, Etc., Etc., are offered unexcelled opportunities.

"Cedartown, Ga."

has Water Works, Electric Light Plant and Underground Sewerage, Churches of all denominations and good Public Schools. For information, write

Cedartown Co., 119 S. 4th St., Phila., Pa.

By J. E. CONANT & CO., Auctioneers, - - Office, Lowell, Mass.

As Committee of the Board of Directors of

The Merrimack Woolen Mills Company

Authorized and instructed so to do, we have unanimously agreed to pledge the plant, together with the Agent's residence, the house property and outlying land, to whomsoever will bid the most for them at absolute auction sale. Pursuant to this decision we shall, on Thursday, the 19th day of December, 1901, at half past twelve o'clock noon, on the premises, regardless of weather, offer and sell, without limit or reserve, to the highest bidders at bona fide auction, THE PLANT OF THE MERRIMACK MILLS COMPANY (Navy Yard Village, Dracut), LOWELL, MASSACHUSETTS, with a history of success since 1814. Phenomenally so since 1877 under the ownership of S. Bachman

HISTORICAL.

Site developed prior to 1756, Hildreths sold mill privilege, dam and buildings to James Martin; he sold to Joseph Varnum, who retired in 1814, and Stanleys bought and erected new mill; plant reached such importance in 1836 it was taken by Chelmsford Co. Messrs Nesmith, Hilton, Hastings and Barrows purchased in 1858 and erected four story brick mill. In 1864 an incorporated Co., capital $500,000, took possession, erected new plant soon famous for its modern equipment and ideas. S. Bachman purchased in 1877; his success was phenomenal, and too well known for comment here. In 1896 he incorporated under Massachusetts laws, capital $250,000, retaining in his family 1335 shares. 1897 and 1898 were disastrous years to woolen manufacturers; this Company, called in "Trade" Merrimack Woolen Co., run continuously, paid its bills and made some money. October 3d, 1898, Mr. Bachman died very suddenly, leaving a widow and daughter. He was the financial support of the Company. His death is the sole reason for this sale.

THE MERRIMACK WOOLEN MILLS COMPANY'S PLANT,

On both banks of Beaver Brook, in a skilled labor community, 850 ft. from Lowell line, 300 ft. from Lakeview Avenue and two lines of electric cars between Lowell and Collinsville and Lowell and Nashua, service three to fifteen minutes, a mile and a half through broad paved street with sidewalks and electric lights, to square at Lowell.

WATER POWER.

Valuable. Average horse power in average year 286, minimum 78, maximum 701; 48-in and 30-in. vertical wheels; water power can be doubled; stream never so low that water was not obtainable for washing wool and cloth. This water power has been the chief support of a successful business for 150 years. Arthur T. Safford, principal assistant engineer, Locks and Canal Company, Merrimack River, Lowell, treats of this water power in detail in catalogue of sale. (Send to office of auctioneers for a catalogue.) A very successful plant owned by the American Woolen Company, The Beaver Brook or Collin's Mills, over two miles up the stream, has been tripled in size and capacity. Our plant has the water the American Woolen Company has; its location is better; it has water from tributary streams, which the American Woolen Company does not have. We offer a plant fully equipped, except dye house; a going concern fit to start in 24 hours; excellent care given since shut down; recently overhauled; technically speaking, a 20-set mill, amply equipped with spinning for coarse and fine woolen fabrics; product, plain and fancy dress goods, casaimeres, piece dyed woolen and worsted cheviots, fancy cloakings, reversible golf cloths, bath wrap goods, carriage cloths, in all weights and shades, from 6 to 24 ounces; carriage robes, beavers and kerseys, in all shades and qualities; worsted and woolen shawls all descriptions and values. Product always in demand. "Trade admitted the Company to be the leader in production of fancy woolen fabrics; sold direct every year thousands of yards to largest department stores in the United States. Equipment today as good for plain and fancy woolen and worsted goods as any time during the past ten or twelve years, no matter what has been or may be said to the contrary. It is a fact that part of the machinery may be somewhat out of date for certain goods. It has all been well kept up, new attachments and appliances added, new machinery purchased and has easily met the demands of the market in production and style. When arbitrary shut down came, the profit on orders turned away would have paid handsome dividends on the capitalization for two years. Entire property will be thrown open to the public from Thursday, the 12th, to day of sale. Plant will speak for itself.

AUXILIARY POWER.

150 H. P. Corliss engine, 50 H. P. Rollins engine, four 150 H. P. boilers; Worthington, Knowles, Corliss pumps.

BUILDINGS

Are either brick or stone, are four, three, or one story, generally with flat gravel roof. Dimensions:—51x174 ft., 48x110ft., 24x40 ft., 50x50 ft., 28x32 ft., 50x132 ft., 42x59 ft., 25x30 ft., 40x190 ft., 28x43 ft., 25x30 ft., 45x70 ft.; office 30x50 ft.

Splendid machine shop and smithy.

It would be difficult to improve upon the present mill, ell and connected buildings, as regards construction, height of post, size of windows, natural light in mill room, ventilation, arrangement and general appearance.

FIRE PROTECTION

Was planned by Arkwright Mutual Fire Insurance Company of Boston. One-eighth of one per cent. is the cost of insurance in the Manufacturers' Mutuals for past ten years.

THE LAND

Is an area of over nine acres divided in four parcels and situate on both sides of the brook and on both sides of Pleasant st. Street frontage 1467 ft. and water frontage 1243 ft.

There can be no harm in saying that the plant can be used very profitably for other purposes than a woolen mill This seems desecration, but it's got to be sold to whoever will bid the most for it. It would make a good yarn mill, weaving mill, wool scouring shop, power plant, hosiery mill, or home for a number of shoe industries. The water power is an unusual one, cheap to maintain; buildings easily adaptable to various uses needing lots of light. A cordial invitation is given to everybody interested in this class of property to make a personal inspection of the plant by a visit to the premises. Purchaser must deposit with or secure to the auctioneer $10,000 as soon as the property is struck off; 50 per cent. of purchase money on mortgage for one year, interest 4½ per cent.; other terms of the auctioneer or at sale. Catalogue showing cuts of property, giving full information of the premises in detail, with other data, upon application to the office of the auctioneers, where all inquiries by mail, telephone or otherwise must be made. Present owners will not be bidders at the sale. EATHEN A. SMITH, AUGUST FELS, PATRICK KELLEY, Committee of the Board of Directors authorized by the stockholders to sell.

Woodworking PLANTS WANTED

At a number of points in the South along the line of the

Southern Railway.

There are good openings for Woodworking Plants, such as FURNITURE FACTORIES, PLANING MILLS, SPOKE AND HANDLE FACTORIES, or other plants using pine or hardwoods. Local people will invest from $6,000 to $8,000 with an experienced man who will himself invest a like amount or more and do a legitimate business. For information write to

M. V. RICHARDS,

Land & Industrial Agent, Washington, D. C.

SOUTHERN RAILWAY.

A PAGE FROM OUR CATALOGUE OF

ALL THINGS ELECTRICAL.

Electrical Material Company, Baltimore. 185

ELECTRIC SPECIALTIES.

PORTABLE ELECTRIC CANDLESTICK.

Style H. H.

Mounted with one of our finest imported silk shades, a reproduction of an assortment of beautifully colored leaves. The candlestick itself as can be seen is an antique dragon.

Made of same material as our other designs.

Beautifully hand engraved and chased, hand burnished, finely polished.

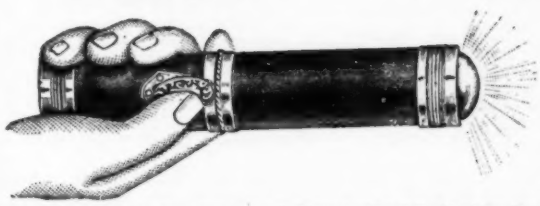
PRICE.

Oxidized Bronze, complete with battery	$7.50
Silver	8.50
Gold, extra	2.00
Shade and Holder	1.75

Notice.—Shade can be mounted on any of our designs.

Directions.—To light candle turn the switch on button; to extinguish light—reverse. When new battery is required slide out bottom of base, remove battery and insert new one.

"EVER READY" ELECTRIC LIGHT.

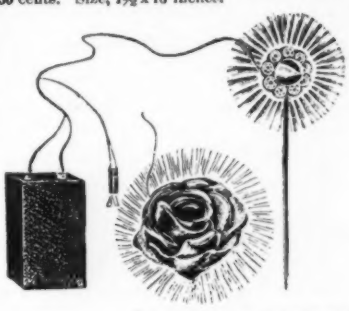


Useful for Miners, Hunters, Plumbers (to look for gas leaks), Physicians (going through dark stairways in tenements), Oil men (in tanks where it is impossible to carry candles or lanterns for fear of explosion), Liquor Dealers (in cellars where a match is dangerous), useful for Watchmen, Policemen, Soldiers in the field, and for all purposes where a light is required instantly. Can be carried into a cellar full of leaking Gas, into an Oil Tank, into Alcohol and Malt Vats, or placed in a keg of gunpowder without the slightest danger.

No 1. (Pocket size) 3½ Volt Lamp, will give from 6000 to 8000 lights before battery requires renewal. It will brilliantly illuminate to a great distance the darkest spaces. **Price, complete with Battery, $3.00.** Extra Battery, 30 cents. Size, 1½ x 8½ inches.

No. 2. (Larger size) 3½ Volt Lamp gives from 8000 to 10,000 lights before battery requires renewal. **Price, complete with Battery, $4.00.** Extra Battery, 30 cents. Size, 1½ x 11 inches.

No. 3. (Largest size) 5½ Volt Lamp, a powerful and brilliant light, gives from 6000 to 8000 lights before battery requires renewal. **Price, complete with Battery, $5.00.** Extra Battery, 50 cents. Size, 1½ x 13 inches.



Parisian Electric Light Scarf Pin.

A genuine Incandescent Electric Light, with powerful Electric Battery. This is the smallest lamp made and gives 2000 to 4000 flashes before renewal of battery is required. Can be carried in vest pocket.

Price, complete	$2.00
" Battery	.45

Special Prices Quoted and Catalogue Mailed Upon Request.

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All about the

Industrial South

There is only one way to obtain this information, that is by reading the

Manufacturers' Record.

It tells you all about the Commercial and Industrial affairs of the South, and is worth to any live business man twenty-five times its subscription price,

FOUR DOLLARS PER YEAR.

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offers a number of fine openings in the line of

MINING, MANUFACTURING and FARMING.

Along the lines of the

Norfolk and Western Railway

are hundreds of towns extending you a hearty welcome.

Address for pamphlets and information

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FOR SALE OR EXCHANGE.

A VALUABLE

STONE QUARRY AND BRICK PLANT

Brick Plant to make Red Shale and Fire Brick, 70 acres of Clay and Coal Mines attached. 100 Acres of good Fire Clay and Ganister Rock. Brick plant in good shape, modern in construction, with labor saving appliances. TENEMENT HOUSES, etc.—This property for sale or exchange for property or Interest that would not require owner's time or attention to care for. This is the only reason for selling, as this plant is a money maker. Plant located near Pittsburg, has connections with B. & O. and P. R. R. Address,

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Bargains in Machinery FOR IMMEDIATE DELIVERY.

Ten 150 H.P. Boilers

LOCOMOTIVE TYPE.

Built of the best materials and in the best manner. Good for 100 lbs. working pressure. Tubes 3" diam.x16 ft. long. Fire-boxes 7 ft.x5 ft.

PRICES LOW.

THOMAS P. CONARD,

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STEAM SHOVELS:—One Marion style "A" steam shovel with a 1¼ yard dipper, also One Osgood with a ¾ yard dipper.

LOCOMOTIVES:—Five 16x24 American type standard gauge locomotives. One 9x12-42" gauge saddle tank mine locomotive. One 7x12, 42" gauge Porter saddle tank locomotive.

SHEAR:—One Alligator shear capable of cutting 3" square Bar and under.

ENGINES:—One 20x40x36 Wright Corliss tandem compound, and one 18¼x34x42 Fitchburg tandem compound. Also others from 5 horse power up.

CONTRACTORS PLANT FOR SALE OR RENT.

CORRESPONDENCE SOLICITED.

GRANT & WILLIAMS,

Park Row Building, NEW YORK.

READ THIS!

If you are in the market for a second-hand Boiler and Engine, Steam Pump, Feed-Water Heater, Steam Trap, Dynamos, second-hand Belting, Pulleys, Hangers and Shafting, second-hand Steam Pipe, any size or quantity; Wrought Iron Tanks, Smoke Stacks of any kind, kindly communicate with us, as we are in a position to fit you out, and will guarantee perfect satisfaction or refund the money and bear all expenses

JOHN HENNING & SON,

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Corliss Engines.
28x60. 26x48. 26x60. 20x48.

Automatic Engines.
12 and 21x24 Porter-Allen Cross Compound.
16x16 Ball. 15x14 Ball.
12x12 A. & S. 8x10 Russell. 10x12 Ball.

Slide Valve Engines.
24x48, 16x24, 12x24, 10x16, 8x10.

Tubular Boilers.
72x18, 66x16, 60x18, 60x16 and smaller sizes. Portable and Vertical Boilers, all sizes.

Single & Duplex Pumps, all Sizes.
Saunder's Pipe Machine. Foundry Equipm't.
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Iron Tools and Woodworking Machinery

Corliss and Double Valve Engines for Trolley Roads and Electric Lighting Stations.

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STEAM ENGINES.

1 20" and 36"x48" Tandem **Hamilton** Corliss, wheel 22'x56" face.
1 18 and 38x48 Tandem Corliss, wheel 22' diameter x 50" face.
1 36x72 Wheelock.
1 29x72 Wheelock.
1 30x60 Harris Corliss right and left hand wheels, 58" face by 20 ft. diameter.
1 22x36 Tangye frame Porter-Allen.
1 20"x48" Geo. H. Corliss.
1 18x48 Greene.
1 10"x34" Harris Corliss.
3 12 and 20x12 Westinghouse Compound.
1 16 in. and 27 in.x16 in. Westinghouse compound.
2 13"x12" Erie Ball.
2 12"x12" Ball automatic.
2 13 in.x14 in. Watertown automatic.
1 14 in.x13 in. Armington & Sims automatic.
1 15½ in.x16 in. New York safety automatic.
3 15½ in.x15 in. Armington & Sims automatic.
1 16 in.x16 in. Ball automatic.
1 18½x18 in. Ideal automatic.
2 16x16 Ames automatic.
2 11x12 Ames automatic.

BOILERS.

2 375 H. P. Sterling water tubes for 150 lbs.
7 125 H. P. Ames Return Tubulars.
2 135 H. P. Vertical Manning.
2 500 H. P. Hazelton boilers.

CONDENSERS.

1 300 H. P. Conover Condenser.
3 325 H. P. Davidson condensers.

Blowing Engine.

1 E. P. Allis Engine with steam cyl. 16"x42"; air cyl. 36"x42".

Railway Generators.

4 300 K. W. M. P. 4, General Electric.
3 100 K. W. M. P. 4, General Electric.
4 60 K. W. Edison bi-polar.

MOTORS.

110, 220, 500-volt motors, from 1 H. P. to 200 H. P.

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ALTERNATORS,
ARC DYNAMOS,
LAMPS, STREET-CAR, ETC.

ROSSITER, MacGOVERN & CO.

Electrical and Steam Machinery,

141 Broadway, N. Y. Factory, Jersey City, N. J.

SEND FOR NEW CATALOG.

ENGINES.

22"x42" Wright Corliss.
14"x30" Horizontal Slide Valve.
10"x20" Supplee Horizontal.
8"x 7" Upright Yoke Engine.
4½"x7" Upright Oscillating.

For sale cheap. For further particulars and prices apply to

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FEED-WATER HEATERS

2nd-Hand 80, 160 and 250 h. p. Berrymans, 200 h.p. Goubert, 150 and 600 h.p. Wainwrights, 500 h.p. National, 600 h.p. Stillwell-Bierce Open Heater. All guaranteed. F. L. PATTERSON, Havemeyer Bld'g, N. Y.

For Sale—ENGINES.

2 Van Dusen Gasolene, 25 h p. each. 1 10 h. p. Otto Gas Engine. All in good condition and cheap. The J. H. DAY CO.,
1144 Harrison Ave., Cincinnati, O.

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Engine Lathes.

96"x17' Triple Geared.
56"x12' and 36"x24' New Haven.
44"x24' Speer.
24"x10' Pond.
20"x8' Prentiss.
38"x10', 24"x12'.

Three 18"x6', 16"x8'.
13"x6' Speed Lathe.

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28"x9½', 24"x6'.

Drill Presses.

60" Cunningham, 44" Betts Radial, 44", 36" and 18".

Quint 10-Spindle Turret Drill. Washburn Twist Drill Grinder.
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19" American Oil Separator.

1,000-Foot Span Lidgerwood Aerial Dumping Cable Way.

CARLIN MACHINERY & SUPPLY CO., Lacock and Sandusky Sts., ALLEGHENY, PA.

SPECIAL BARGAINS.

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76"x20' Farrell, compound rest, triple-geared, worm drive.
60"x20' Wilmarth, triple-geared.
18' swing pit lathe, very heavy.
44"x26 Fifield, triple-geared, new.
49"x14' Fitchburg, plain turning.
38"x22 Fish, triple-geared, new.
27"x12' Wright, C. R. & P. C. F.
26x10 New Haven, C. R. & P. C. F.
25"x25' Lowell, suitable for shafting.
21"x10 Wright, R. & F., P. C. F.
19"x11' Lodge & Davis, C. R., taper & chuck.

PLANERS.

48x48x14 Putnam, latest patterns, 2 hds., new.
42x42x16 Bement. 41x25x15 Whitcomb.
24x24x6 Pond & Wheeler, new.
19'6" plate planer.

SHAPERS.

28" Smith & Mills, geared.
26" ditto.
32" Prentiss friction, new.
26" ditto.
15" Putnam friction, good as new.
12" Warren trav. hd.
15" Prentiss friction. 12" Prentiss crank.

SCREW MACHINES.

2" Cleveland automatic, A1.
No. 3 Pratt & Whitney automatic.
1", ⅝" and ⅝" Brown & S. automatic.
5-16" Hartford automatic.
No. 2½, No. 2, No. 1 and No. 0 Pratt & W. hand.
No. 2½ Garvin double turret.

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3, 4 and 5 and 6' Bickford radials, new.
4' Cincinnati radials, new.
3' McNaull univ. radial, fine order.
3 36" Column drills, very heavy.
2 25" Gould & E. uprights, B. G. & P. F.
2-spdl. Slate, sensitive. 1-spdl. ditto.

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Double-end Kent punch and shear.
20' hydraulic keel bending rolls.
200-ton hydraulic vertical press.
1¼" National bolt cutter.
350-lb. Merrill frict. board drop hammer.
600-lb., 800-lb., 1000-lb., 1400-lb. and 1700-lb. ditto.
No. 69 Bliss drawing press.
125-lb. Merrill air hammer.
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No. 3 Brown & Sharpe tool grinder.
No. 3 Cincinnati univ. miller, no heads.
No. 2 Brown & S. univ. miller & vert. attach.
No. 2 Cincinnati plain miller.
No. 15 Brown & Sharpe plain miller.
No. 6 Brainard heavy Lincoln pattern miller.
No. 2 Pratt & Whitney hand miller.
Ames & Pratt & Whitney Lincoln pattern.
50" Bickford vert. boring mill.
Also large assorted stock of other tools. Send for list.

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For Immediate Delivery.

1 20" Williamsport single surfacer.
1 24" J. A. Fay & Co. double surfacer and matcher.
1 36" Rowley & Hermance band saw.
1 38" J. A. Fay & Co. band saw, No. 2.
1 Houston sash and door tenoning machine.
1 Smith sash and door tenoning machine.
1 J. A. Fay & Co., car tenoning machine.
1 Rowley & Hermance improved panel raiser.
1 Smith panel raiser.
1 1⅛" Lewis punch or shear.
1 100 lb. drop hammer.
1 850-lb. Merrill drop hammer.
1 24" Aurora upright drill.
1 25" Blaisdell " "
1 40" New Haven upright drill.
1 52"x48"x24' Sellers' planer, 3 heads.
1 24"x24"x5' Powell planer.
1 20"x21' Johnson engine lathe, taper attachment.
1 48"x24' triple-geared engine lathe.
1 motor-driven air compressor, Hunt.
1 Weston 98-light generator.
1 lever-feed automatic turrett.
1 1¼" No. 2 hollow spindle automatic screw machine.
1 Brown & Sharpe screw slotting machine.

U. Baird Machinery Co.

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FOR SALE.

Lot of Boilers, Engines, Lathes, Planers, Drill-Presses, 1 Large Fire Pump, Steam Pipe, all sizes, and about 500 Tanks of different sizes.

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Rope Transmission Rig

CONSISTING OF

1 22 foot Grooved Wheel, 61" face with 22 grooves for 2¼" rope. The shaft is 20" diameter in wheel, 18" in bearings and has clutch coupling on end.

2 heavy Pillow Blocks with 30" bearing.

1 54" Grooved Wheel, 61" face, with 22 grooves for 2¼" rope; bore 10½".

All parts are heavy, well proportioned and in the best of condition.

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For Immediate Delivery.

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One Nagle Center Crank, 14x14, new.
One Erie City Side Crank, out-board bearing, 11x15, thoroughly overhauled and in perfect condition.

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One Worthington Duplex, 2x3x2.
One Blake Single Cylinder, 5¼x4x6.
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The Machinery of First-Class Cotton Mill.

Now in operation. Address

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WORTHINGTON JET CONDENSER, size 9x12x10. Capacity about 300 to 400 H. P. Good order, prompt delivery.

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18", 22", 24", 26", 28", 30", 32" and 36" Lathes. Any length.

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White & Middleton Gas Engines.

All Sizes and Guaranteed as Represented.

Large line of Steam Engines, Boilers and Pumps, all sizes; 6-H.-P. Hoisting Engine, 8-H. P. Portable Engine and Boiler, 175-Light (nearly new) C. & C. Dynamo, 2 Rev. and Drum Cylinder and Job Printing Presses, Shafting, Hangers, Pulleys and Forge, Wire Belt Fastener, ¼-H.-P. Water-Motor, complete Stereotype outfit, complete Plants and Machinery of all kinds bought, sold and exchanged.

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DRY KILN,

Nichols Patent.

Will dry 200,000 feet each 24 hours. Is good as new, with pump, etc. Less than half price. Six return flue tubular boiler, 125 to 150 H. P.; will carry 90 to 120 lbs. steam. All perfect. Immediate delivery.

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FOR SALE, second-hand, one J. A. Fay & Egan Co.'s New Band Short Log Saw Mill and Edger. Also one Baldwin, Tuthill & Bolton's Automatic Band Saw Sharpeners and Tools for same.

These machines in first-class condition. Write for full particulars.

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1 3-sided Planer and Matcher, Frank, $175. 1 38" Connell & Dengler Circular Re-saw, $1.25. 1 42" 3-roll Egan Sander, $400. 1 30" Single Drum Sander, $45. 2 20" Pony Planers, each, $65. 1 24" Single Surfacer, $100. 4 Engines. 2 Boilers. Write for complete list.

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Two Davis & Furber Machine Co.'s Nappers; good as new; used only short time. One Miller Press & Machine Co.'s Press; used only 6 months.

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36 inch Leviathan Belt.

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SPECIAL.—40-H. P. OTTO DOUBLE CYLINDER

Gasoline Engine

with all fittings and connections complete and in best of condition for sale at **$500**
Guaranteed as stated Now running a wood-working plant.

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Second-hand Corliss Engines,

100, 150, 200, 350, 500 and 800 H. P. Boilers, all sizes. Steam Pumps in great variety. Send for bargain list of second-hand machinery.

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Electrical Machinery

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Correspondence solicited.

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Second Hand Wood Working Machinery.

1 14" Planer and Matcher, key stone, of the Goodell & Waters make.
1 6" four-sided Moulder, Houston's make.
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1 54" Band Resaw, practically new, F. H. Clement's make.
1 24" Sliding Resaw.
1 Greenly Self-feed Rip Saw, practically new.
1 30"x12" Double Surfacer, Berlin Machine Co 's make, practically new.
Large assortment of Engines, Boilers, Pumps, Heaters; etc.

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New and Second-Hand Boilers, Engines, Mining Outfits and General Machinery.

3 100 H. P. Return Tubular Boilers, made by the Penn. Boiler Works (new, never having been in brick work) with stack and breeching complete.

2 65 H. P. Return Tubular Boilers, very fine, A No. 1 condition.

1 7x10 Double Cylinder and Double Drum **Hoisting Engine,** in A No. 1 condition, having been used but very little.

1 4x6 Double Cylinder and Single Drum **Hoisting Engine,** as good as new, only used a few weeks. Both of these Hoisting Engines have been thoroughly overhauled in our plant.

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Automatic Engines—1 13"x14" self-contained, Chandler & Taylor. 1 12"x16" centre crank, Erie City Iron Works.
Horizontal Engines—Cylinders 16"x24", 12"x20". 9"x12". 7"x14."
Portable Engines—1 25 H. P. on skids; engine mounted on boiler.
Vertical Engine and Boiler—1 8 H. P. engine and 10 H. P. boiler combined, on one base; boiler has submerged tubes.
Stationary Boilers—1 60"x19', 20 6" flues; 1 48"x16', 40 3½" flues.
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Steam Pumps - Single and duplex, all sizes.
Grist Mill—1 24" under runner geared mill, iron frame, good as new.
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Frick Ice Machine.

Twenty-five Ton Refrigeration.
Ten Ton Manufacturing.

First-class condition. Cost $10,000. Selling price to move quickly $2500.

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FOR SALE.—Engine 12½x24, $200; 12x16, $200. Traction Engines, 10 and 12 horse, $300; 10 and 12 horse portables on wheels, $175 each. One Fire Engine, made by Cole Bros., Pawtucket, R. I., all complete. Pratt & Whitney Drill Presses, 12" swing, $15. Five Boilers, 56x18, twenty flues 6" diam., $300 each. 16-horse Portable Engine and Boiler on wheels, with Pony Saw Mill, $300. 10-horse Hoisting Engine, Portable Boilers, 20, 30, 35-horse, with engines to match, at one-third their actual value. Machinery of every description at buyers' prices. **D. L. CASEY MCH. CO., Springfield, O.**

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No.	H.P.	Maker.	Cylin.	Speed.	Whls.
2	150	Buckeye "C"	14¼x16	240	72x15
4	150	Westingh'se	13&22x13	290	
1	125	"	11&19x11	300	
2	75	"	12x11	300	
1	75	N. Y. Safety	12x12	300	
1	100	Porter-Allen	12x20		
1	50	Arm. & Sims	9½x12		
1	325	Baragwanath Heater, brass tubes.			

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Five 72"x16' High Pressure Boilers, now carrying Hartford Insurance for 125 lbs. steam pressure. Can be delivered about January 10th next. Full line of all kinds of machinery in stock. Write for prices. Machinery that has been used, but in good condition, also bought.

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Wood and Iron Working Machinery,

New and Second-hand.

If in the market for machinery, send for our descriptive price list.

LOUIS E. RECHTIN & BRO., Cincinnati, O.

2D-HAND BERRYMAN HEATERS,

all sizes. Taken in trade for our Improved Berryman. In perfect order. Tested and guaranteed. Prices reasonable. BENJ. F. KELLEY & SON, Makers, 91 Liberty St., N. Y.

Engine Bargains

100 h. p. 12x24 Buckeye Automatic.
100 h. p. 12x20 Rice Automatic.
150 h. p. 16x42 Fraser & Chalmers Corliss.
150 h. p. 14x30 Cummer 4 valve Automatic.
250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
65 h. p. 12x24 Cooper Slide Valve.
50 h. p. 12x18 Slide Valve.
14x7x10 Smith-Vaile Fire Pump.
200 h. p. Baragwanath Heater.
45 h. p. 11½x18 Slide Valve.
60x16 ft. Tubular Boiler.
200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and ready for shipment.

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Second-hand Machinery

Steel Pressure Blowers. Vertical Boilers, 6 to 60 H. P. Hor. Tub. Boilers, 27 to 100 H. P. 3 Hor. Tub. Boilers, 125 H. P., fine condition. 15, 25, 75 H. P. Hor. Slide Valve Engines. 3½ and 10 H. P. Vertical Engines. 2 and 7 H. P. Gas Engines. 3 H. P. Shipman Coal Oil Engine. Conant Corn Cooker. Corn Silker. Corn Cutter. One Fisher Kettle. Open Kettles. Lot Trucks. 6 Hughes Steam Pumps, 4½"x6"x6", 4" suction, 3" dis. One each Worthington and Dean Duplex Pumps and Receivers. S. A. Woods A Flooring Machine. Gray & Woods Planer, 24"x16"x18". Tenon Machine. Mortising Machines. Self feed Rip Saws. Sliding Carriage Cut-off Saw. Swing Saw. Variety Moulders. 18" and 20" Pony Planers. Huntingdon Hor. Boring Machine.

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No. 3 DECK SCOW 100'x29'x9'8"
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No. 4 DERRICK SCOW 101'x31'x10'
FLOATING PILE DRIVERS
No. 2 42'4"x20'4"x4'4" No. 3 55'8"x 20'10"x5'0" No. 8 50'9"x23'0"x6' 3" No. 9 50'9"x22'6"x4'2"
2 OSGOOD DREDGES

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Hydraulic Car Wheel Presses,

16", 24", 30", 38", 46", 54", 72".

New design. Prices reasonable. Write for full particulars.

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BIG BARGAINS.

General Electric, three phase, sixty cycle, **Inductor Motors**

1 15-H. P. 110 volt, speed 900, price $350.00
1 30-H. P. 110 volt, speed 900, price $550.00
1 75-H. P. 550 volt, speed 600, price $1100.00
Chicago delivery, ready to ship. Hundreds of other bargains in stock. **GUARANTEE ELECTRIC CO.**
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Testing Machine FOR SALE.

200,000 pounds Second-Hand Riehle Testing Machine, in first-class condition. Address

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Five hundred pieces of Second-hand Iron and Woodworking Machinery, Engines, Boilers, etc. Send for list.

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Tanks, Steam Pumps, Boilers, Engines and Frictionless Babbitt Metal, for sale. Machinery of all Kinds manufactured.

ESTIMATES FURNISHED.

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1 Fairbanks Gasoline Engine (30 horse power). This engine is new and complete in every particular, including a 40-gallon galvanized tank, 1 box batteries, fixtures, piping, belting, and an extra 525-gallon galvanized gasoline tank. Will sell at a great bargain. 1 Steam Fire Engine, late from Baltimore department. 4 Hoisting Engines, 12, 15, 18 and 25-horse power respectfully. A number of single and duplex Steam Pumps. Cistern, Deck and Deep Well Pumps (new). General machine work and repairing. I make a specialty of repairing Steam Pumps, High-speed and Gasoline Engines.

W. W. KIRK,
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FOR SALE.

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No.	
375.	13x12 Ball automatic.
163.	Armington & Simms cross compound, 13½x 20¾x15.
192.	11x12 New York Safety.
217.	15x16 Ball automatic.
219.	11x20x14 McEwen tandem compound.
210.	11x10 Westinghouse.
148.	12x20x12 Westinghouse.
220.	11x19x11 Westinghouse.
222.	14x24x14 Westinghouse.
0x9.	18x30x16 Westinghouse.
297.	8½x10 Taylor-Beck automatic.
047.	22x60 Harris Corliss.
0x10.	16x36 Hoffman & Billings Corliss.
60.	13x34 Putnam Corliss.
75.	20x30 slide valve.
76.	18x28 Nicol-Burr slide valve.
1044.	16x28 slide valve.
235.	20x40 Nordburg slide valve.
213.	12x24 slide valve.
173.	13x34 Fitchburg Corliss.
132.	16x24 slide valve.
206.	14x24 box bed slide valve.
223.	23x36 Wright Corliss.

GASOLINE ENGINES.

154.	Two 50 H. P. Otto gas and gasoline engines.

HOISTING ENGINES.

810.	10x16 double drum, double cylinder, Mundy hoisting engine.
755.	11x18 double drum, double cylinder, Mundy hoisting engine.
753.	8¼x12 double, single drum.
377.	Locomotive boiler with hoisting rig attached.
108.	8x12 Webster, Camp & Lane double cylinder, single drum.
55.	8x12 single cylinder hoisting engine and boiler.

BOILERS.

469.	4-54x15, no dome.
004.	175 H. P. Heine water tube.
005.	120 H. P. Sterling water tube.
676.	60x12 vertical fire box.
686.	66x16 tubular.
688.	66x18 tubular.
708.	66x14 tubular.
716.	4-72x20 tubular, no dome.
007.	80 H. P. locomotive fire box boiler.
008.	100 H. P. locomotive fire box boiler.
009.	50 vertical, from 2 to 20 H P.
010.	20 locomotive fire box boilers, from 10 to 40 H. P.
0x2.	125 H. P. locomotive fire box boiler.

AIR COMPRESSORS.

337.	1 straight line steam driven air compressor, made by National Drill & Compressor Co., 20x22x24
890.	5¾x7x10 Norwalk air compressor.
896.	Hall duplex air compressors, steam driven 10x12x12, 6x8x8 and 8x10x10. 1 Hall duplex belt driven air compressor, 6x6.
902.	1 Hall duplex air compressor, 7x8x9.

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FOR SALE.

One pair 20"x60" Harris-Corliss Engines, $2500.
One 26x60 Harris-Corliss Engine, $1200.
One practically new Harris-Corliss, 10x24, $550.
One 12x36 Swampscott-Corliss, $650.
One 18x48 Automatic Engine, $500.
One 26x60 Corliss Cylinder.
One 18x48 Corliss Engine.
One No. 8 Cyclone Dust Collector, 12" inlet.
One new 20"x42" Cylinder for Corliss Engine.
One 700 H. P. Heater, $125.
One 500 H. P. Heater.
One 700 H. P. Blake Condenser, $300.
20-36" Whitin Cotton Cards, new clothing, with carrier, railway heads, $35 each.
102-40" Whitin Looms, $25 each.
127-42" Iron Stack ¼", $150.
Large lot of leather and rubber belting.

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FOR SALE CHEAP

Send for our new list of PLANING MILL and FURNITURE MACHINERY. We send photograph of everything.

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2 120 H. P. 66"x18' Tubular Boilers.
1 80 H. P. 60"x16' Tubular Boiler.
1 60 H. P. 54"x18' Tubular Boiler.
1 100 H. P. 14¼x16 Buckeye Auto. Engine.
2 16x12x10 Worthington Duplex Pumps.
2 34 Exhaust Fans.
1 60 H. P. 10x12 N. Y. Safety Auto. Engine.
1 80 H. P. 12x20 Atlas Left Hand Automatic Engine.
18 ½x10¼x10 Worthington Duplex Pumps.
9x12 Ide Automatic Engine.
Also a large number of smaller Engines, Boilers, Pumps, Heaters, etc.

E. O. WILLIAMS,
Successor to RAINIER & WILLIAMS,
63 S. Canal St., CHICAGO, ILL.

FOR SALE—New or Second-Hand STEEL T

RAILS

Light or heavy section.
WE BUY OLD RAILS if fit to relay.

Robinson & Orr, 419 Wood St., Pittsburg, Pa.

Contractors' Outfit

FOR SALE.

1 1000-ft., 1¾-in. Sherman Cableway, with Lambert engine, complete.
Stiff Leg, Guy and Breast Derricks, hand and steam power.
Traveling Derrick, Byer's.
Concrete Mixer, power.
Horizontal Boiler, 40 H. P.
"New Ingersoll" Drills E 9, new and second-hand.
Pile Driver. Bucyrus Dredge.
Austin "New Era" Graders and Dump Wagons, slightly used.
Wheel and Drag Scrapers, used less than one month.
Horse and Mule Harness.
Pipe Fitting and Machine Shop Outfit.
Plows, Shovels, Small Tools, etc.

Machinery located at Trenton Falls, N. Y.; Rome, N. Y., and Wyoming, Ill.

For particulars, enquire of

The Warren-Burnham Co.,
81 Fulton St., New York City.

Largest Stock of Engines, Boilers, Dynamos and General Machinery. Rebuilt and Guaranteed. Immediate Delivery.

1 28"x48" Green Automatic. 1 16½"—32"x36" Cross Compound Fitchburg Automatic. 1 12"—20"x16" McEwen Automatic. 1 22"x32" Watertown Automatic. 2 20"x42" Green Automatics. 2 17"x30" Williams Automatics. 1 15½"x16" New York Safety Automatic. 1 15"x12" Harris Corliss. 1 14"—27"x14" Westinghouse Compound. 2 15½"x15" Armington & Sims Automatic. 2 14½"x18" Beck Automatic. 1 14"x16" McEwen Automatic. 1 13"x14" Vertical Fitchburg Automatic. 1 10"—18"x12" Ball Tandem Compound. 2 12"x18" Russell Automatics. 2 13"x12" Ball Automatics. 1 10"x16" Buckeye Automatic. 1 9"x9" New York Safety Automatic. 2 80 H. P. Westinghouse Compounds. 5 75 H. P. Westinghouse Standard Automatics. 2 65 H. P. Westinghouse Compounds. Also a great many others, all types.

Send for special list.

BOILERS—2 300 H. P. Climax Vertical Water Tube Boilers. 2 280 H. P. B. & W. Water Tube Boilers, 200 lbs. steam pressure. 1 300 H. P. A. & R. Water Tube Boiler, 165 lbs. steam pressure. 2 100 H. P. National Water Tube Boilers. 5 66"x18' Horizontal Tubular Boilers, 125 lbs. steam pressure. 3 66"x18' Horizontal Tubular Boilers, with Hawley down draft. 3 66"x16' Horizontal Tubular Boilers, 125 lbs. steam pressure. 2 66"x16' Horizontal Tubular Boilers, 100 lbs. steam pressure. 4 54"x16' Horizontal Tubular Boilers, 100 lbs. steam pressure. 2 48"x14' Horizontal Tubular Boilers, 100 lbs. steam pressure.

Several full Railway and Electric Lighting Equipments. Large stock of Machine Tools. Also a large assortment of New Machinery for immediate delivery—Lathes, Planers, Shapers, Drill Presses, Milling Machines, Dynamos, Motors, Gas and Gasoline Engines, Steam and Centrifugal Pumps, Contractors' and General Supplies. Write for special catalogue and prices.

FRANK TOOMEY,
137-131 N. Third Street, PHILADELPHIA, PA.
Long Distance Telephone 261-262.

For Sale at Oil City, Pa.

A bargain to quick buyer; the lot for $650. 2 boilers, 9 engines, 3 governors, outfit for grist mill. Boilers are—1 stationary, 54x12, 69 tubes, 3 in.; portable 3 ft. box, 24 tubes, 3 in. Engines are—2 9x12, Struthers and Ball, 1 8x10 Newberg, 2 7x12 Farrar and Woodby; 2 8x12 Buffalo; 2 6x12 Buffalo, and Wood Taber. 3 Gardner governors, 2 in. Grist Mill Outfit as follows: 1 set of 4-ft. French Burrs; 1 set Case Corrugated Rolls, 6x12; 1 20-in. Poney Middling Mill, under runner, made by Nordyke & Marmon Co., Indianapolis, Ind.; 1 large Triumph Power Corn Sheller; 1 Eureka Smutter and Cleaner; 1 Hercules Cleaner, Scoures and Separator; 1 Geo. T. Smith Middling Purifier, No. 1, double; 1 Howe Scale, 4000 lbs., on truck; lot of Wood Work, Conveyors, Bolters, Elevators, etc., such as ordinarily used as setting up a Grist Mill. This is a good and cheap lot of machinery sold to close up estate at Oil City. Address

A. W. LOGAN, OIL CITY, PA.

Second-hand Machinery

FOR SALE.

One marine steel fire box boiler 10 feet long, 73 inches diameter.
Eight cylinder boilers, 36 inches diameter, 36 feet long.
One Lane & Bodley engine, 14x20.
One smoke stack, 4 ft. in diameter, 61 ft. long.
One single cylinder slide valve 15 H. P. hoisting engine.
One Wm. E. Hill & Co.'s drag saw.
One surfacer.

THE CYPRESS LUMBER CO., Apalachicola, Fla.

For Sale—Dynamos, Engines, Boilers, &c.

DYNAMOS—Brand new, modern, best make, fully guaranteed for one year, 110 volt, compound wound.

27-light	Dynamos,	all complete,	$ 67.50.
53-light	"	"	112.50.
93-light	"	"	146.25.
130 light	"	"	183.75.
200-light	"	"	206.25.
270 light	"	"	228.75.

MOTORS—Brand new, best make, 110 volts, ¼ horse, $28.50; ½ horse, $36; 1 horse, $56.25; 2 horse, $67.50; 3 horse, $90; 5 horse, $135; 7 horse, $146.25; 10 horse, $183.75; 20 horse, $228.75. Have also 220 and 500 volt motors.

We have also some first-class second-hand Machinery, as follows: Alternating Current Dynamos—2 1300-light Westinghouse at $385 each, also others.

ENGINES.

100 H. P. Westinghouse Compound, $475.
50 H. P. Dick & Church Automatic, 300.
125 H. P. Westinghouse Compound, 600.

Also some 150, 250 and 350 H. P. Engines.
BOILERS—2 60"x16' Hor. Tubular, at $260 each. Also larger and some smaller Boilers.
Berryman Heaters—1 700 H. P. $195; also smaller ones. Electric Power Generators—100 H. P., 500 volts, $675; also others. Pulleys, Shafting, Belting, &c. Write us.

American Electric Supply & Mfg. Co.
27 Thames Street, NEW YORK CITY.

Water Wheels

FOR SALE.

Two Pair 35" Special Leffel Horizontal Shaft Turbines.

These two pairs of turbines coupled together will develop, under 15 feet working head of water, 400 H. P., using a total of about 18,000 cubic feet of water per minute; speed of turbine shafts 165 r. p. m. Turbine shafts hammered wrought iron, 5⅝" dia. Turbine runners with steel buckets. The pedestal bearings are supported on columns. The center casing for each pair of these turbines made of riveted steel, with draft tubes 6 ft. dia. Both pairs of turbines fitted with upright gate shaft and gear connections. Have not been used.

For further information write to the undersigned.

JNO. T. McKEE, Buena Vista, Va.

FOR SALE!

1 25-h. p. locomotive boiler, 1 15-h. p. return tubular boiler and ten radiators, also 6 miles 40-lb. steel relaying rails. Southern delivery, first of January, and 40 40,000 capacity flat cars.
LOCOMOTIVES, standard and narrow gauge.
1 75-h. p. ret. tub. boiler; 70 ton 40 lb. steel T rail, immediate delivery. Also a Forney type saddle tank standard gauge Porter locomotive, cylinder 12x18, diameter of driving 42", thickness 2"; also an 8-wheel American type, Rodgers make, 14x22" cylinder. 1 Saw Mill, capacity about 15 or 20,000 ft. a day; also 3000 Standard M. C. B. good second hand couplers, one 42" gauge passenger coach and two 75-H. P. return tubular boilers. These goods are all right. Write

JOS. E. BOWEN, Citizens Bank Bldg., Norfolk, Va.

FOR SALE.

One Practically New 15-Tons

Kelley Steam Road Roller

R. S. ARMSTRONG & BRO., Atlanta, Ga.

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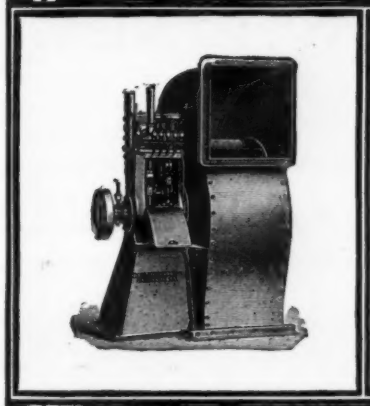

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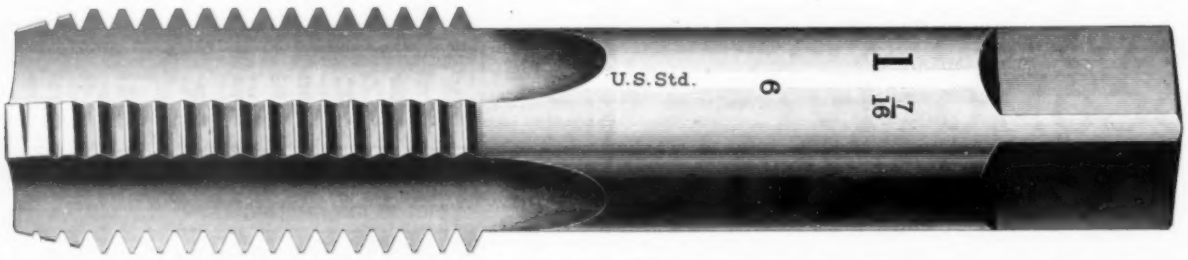

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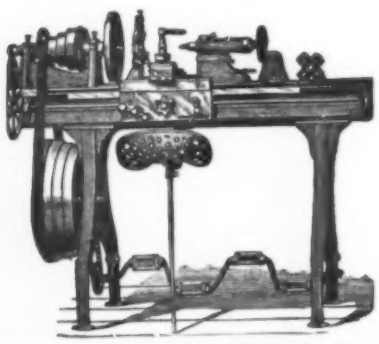

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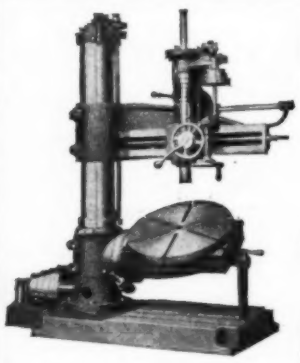

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Back gears on the head, making communication direct to spindle.

Sixteen speeds to spindle.

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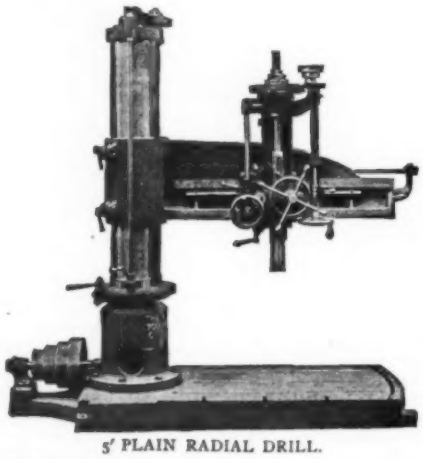

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SOON PAY FOR THEMSELVES.

Save time, save wear of drills, save breakage.

DRILLS DO FASTER WORK.

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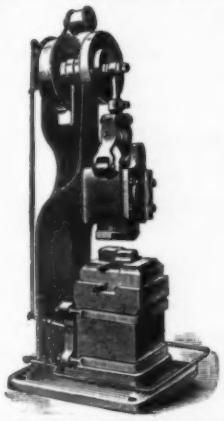

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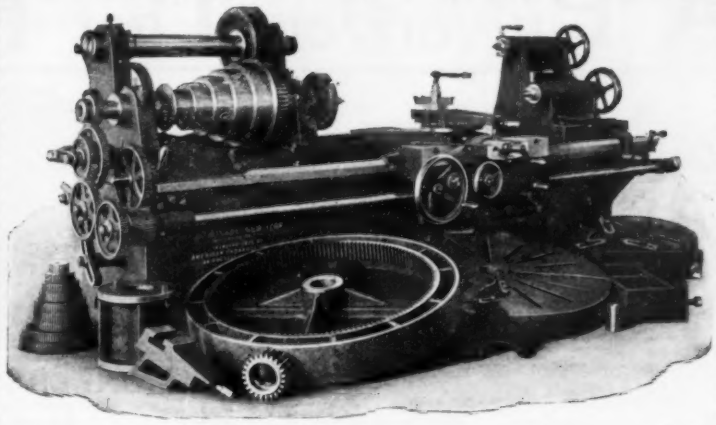

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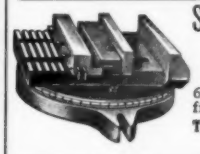

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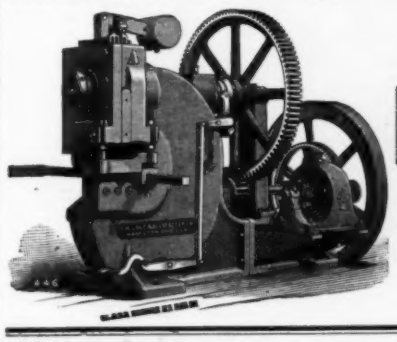

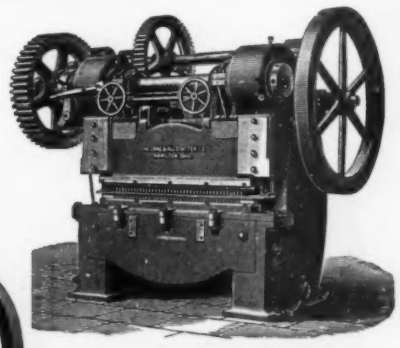

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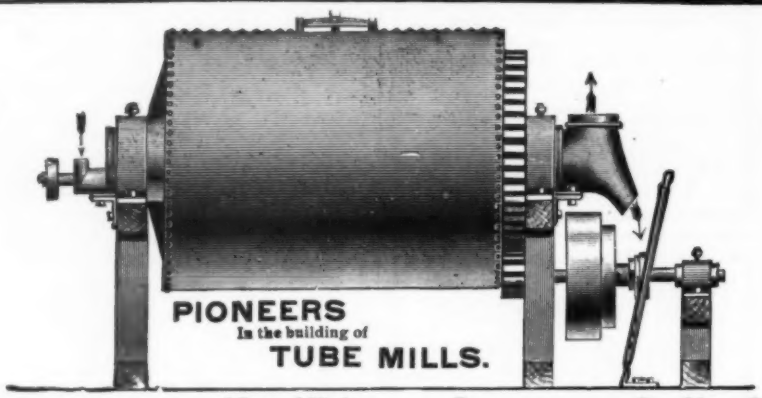
Will reduce to an absolutely impalpable powder, minerals, paints, drugs, chemicals, colors, cement and materials which cannot be successfully and profitably reduced by any other method.



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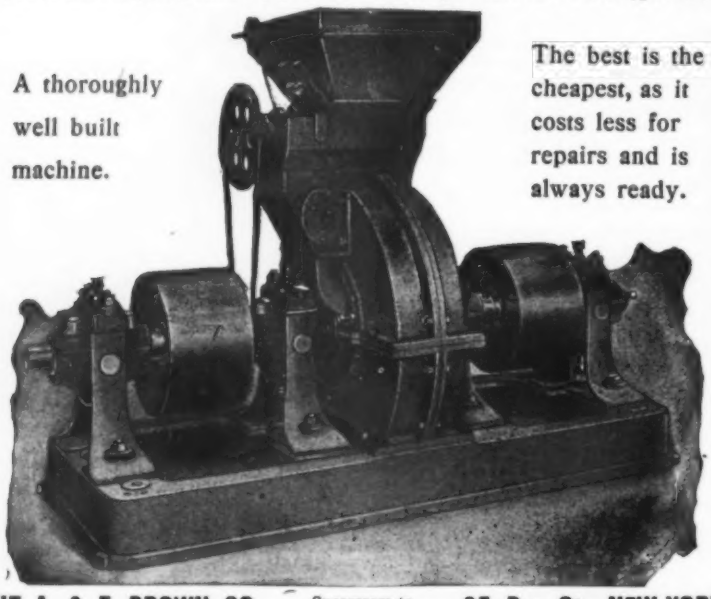
A thoroughly well built machine.

The best is the cheapest, as it costs less for repairs and is always ready.



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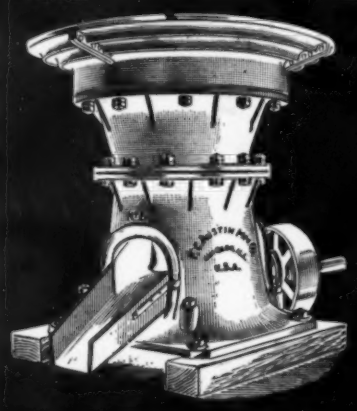

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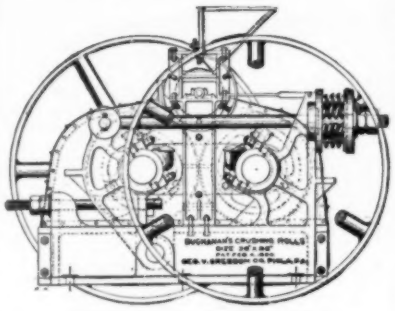

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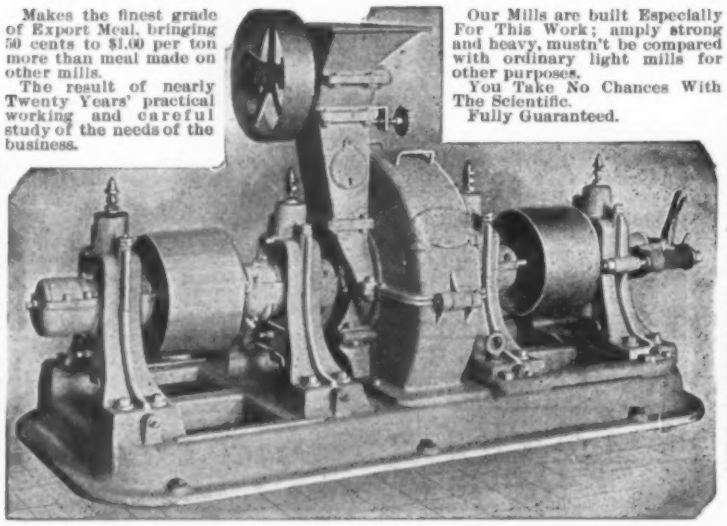

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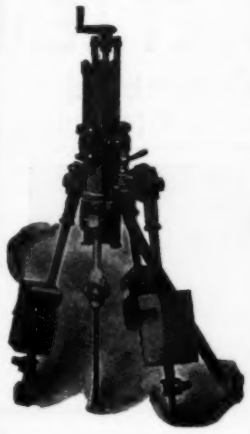

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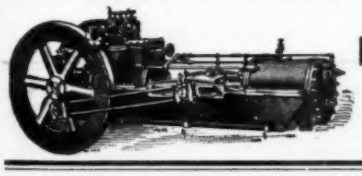

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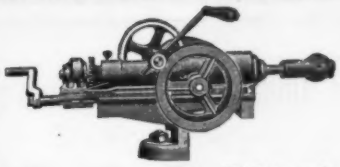

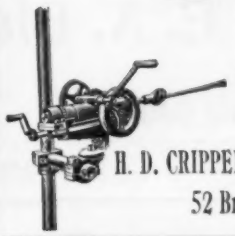

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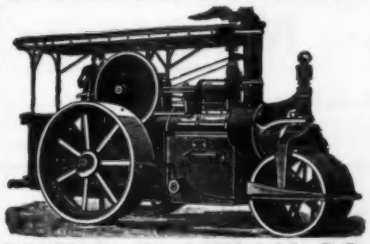

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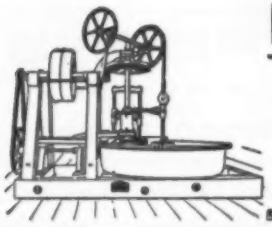

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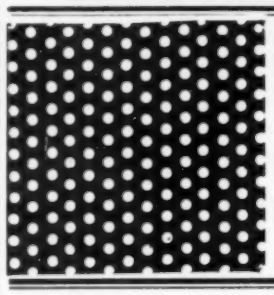

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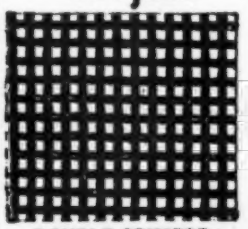

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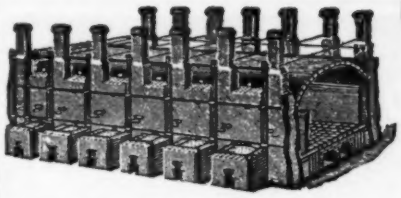

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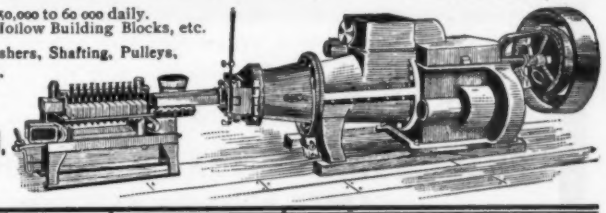

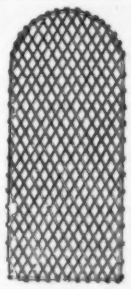

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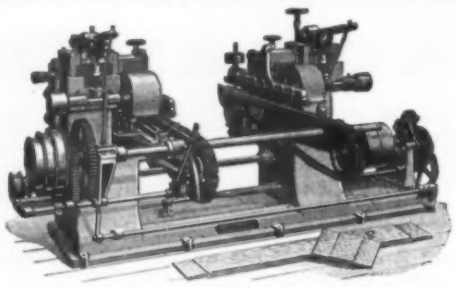

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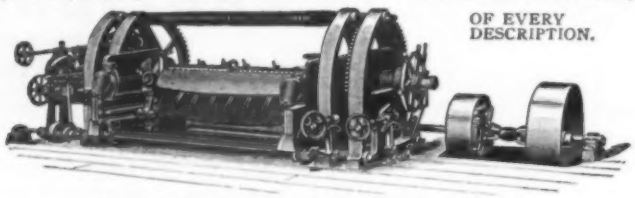

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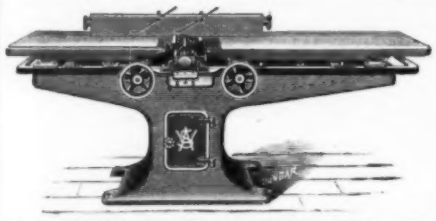

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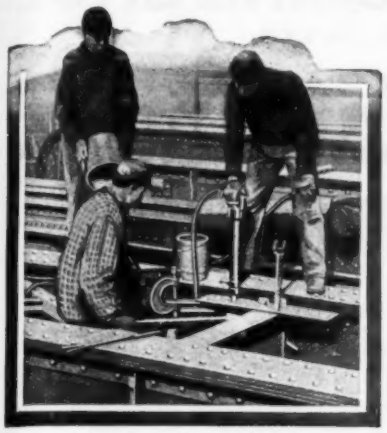

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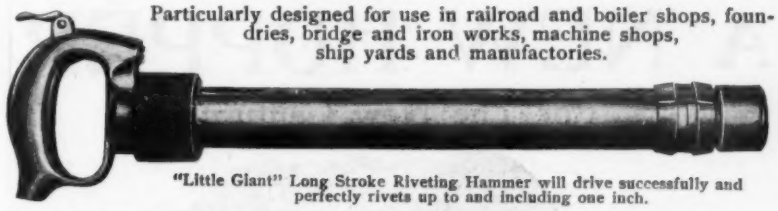

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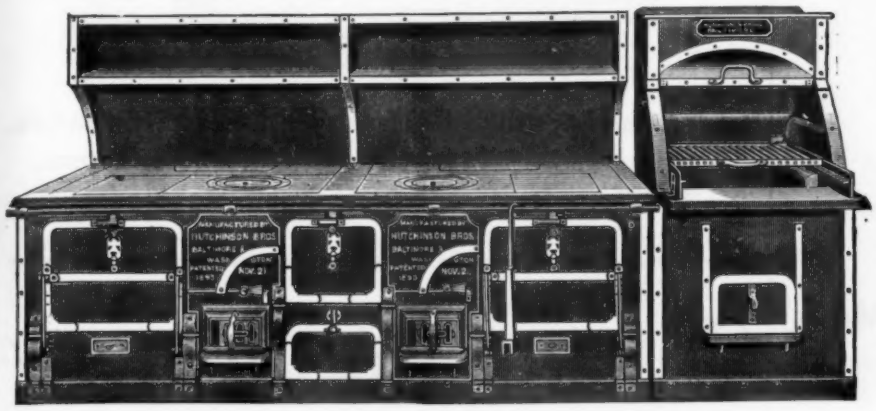

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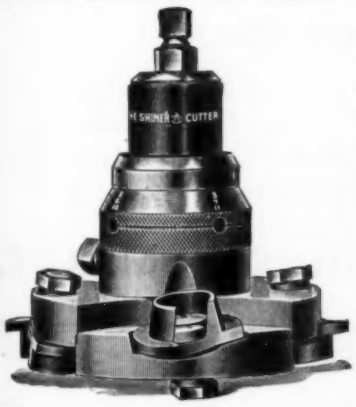

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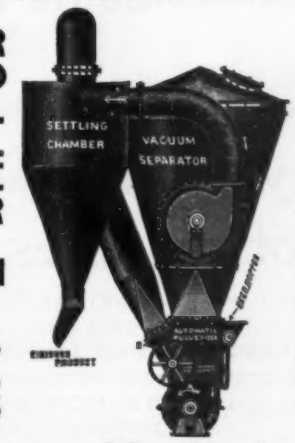

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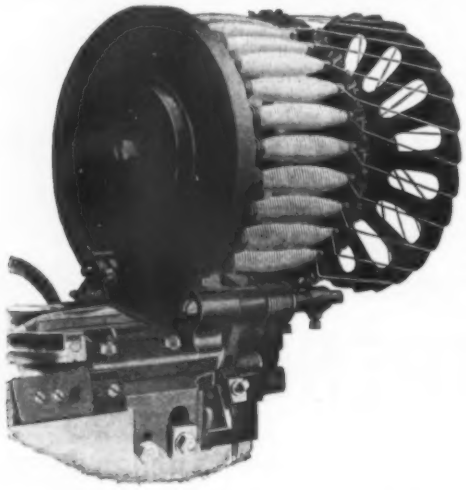

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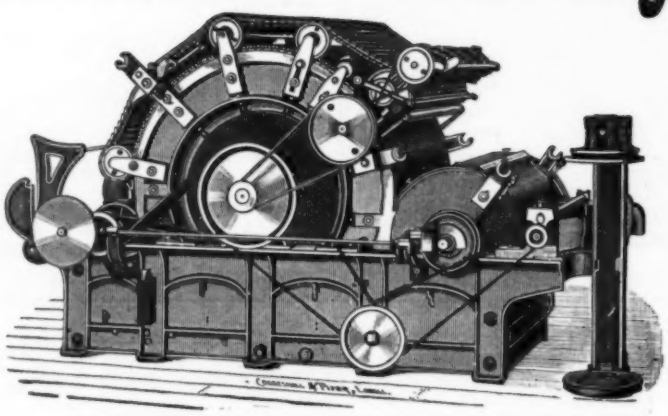

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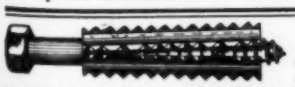

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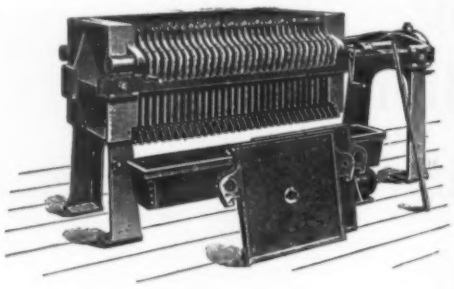

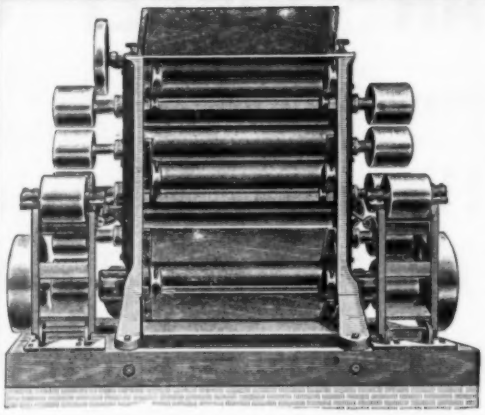

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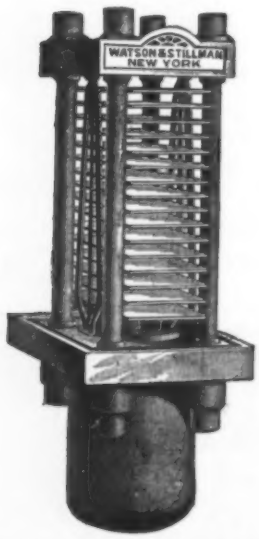

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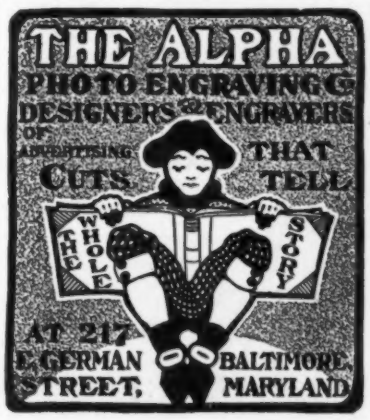

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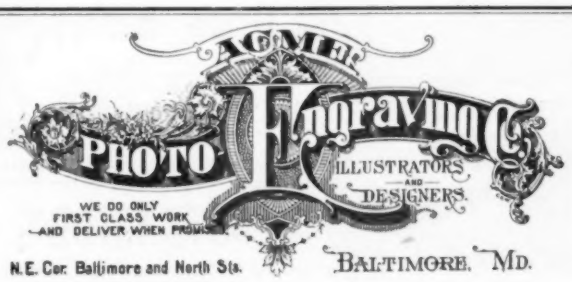

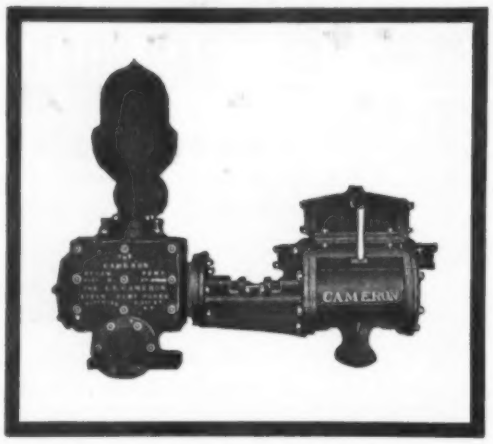

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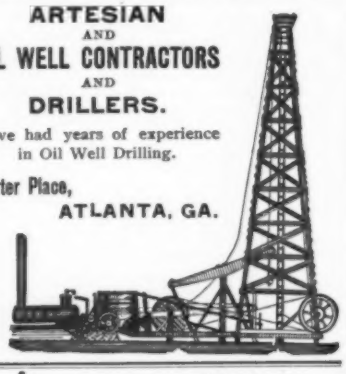

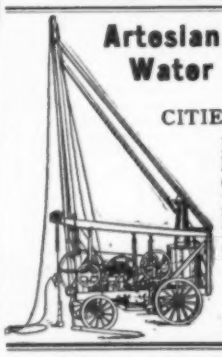

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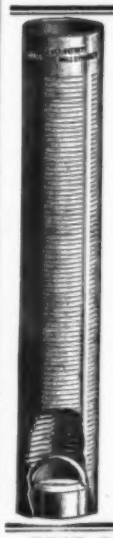

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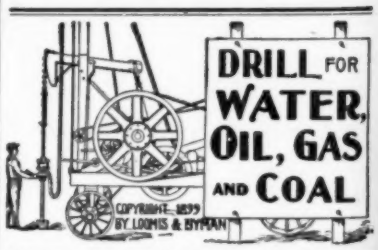

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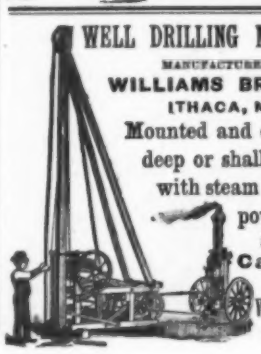

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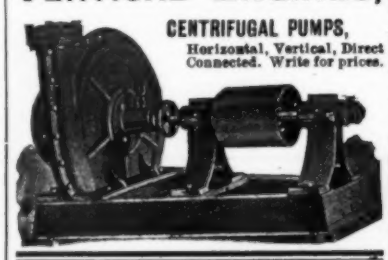

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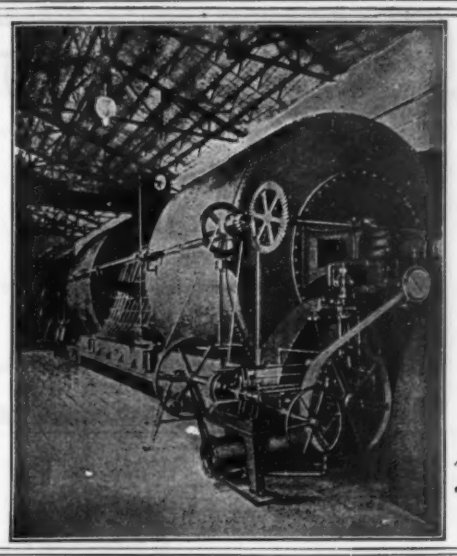

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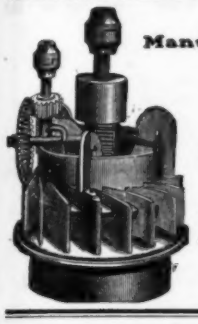

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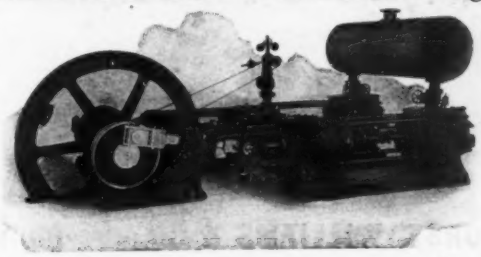

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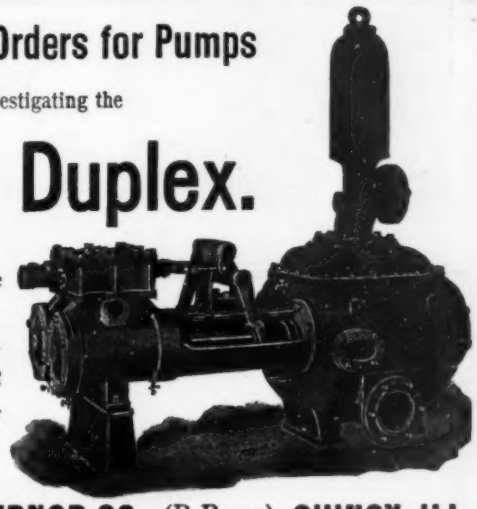

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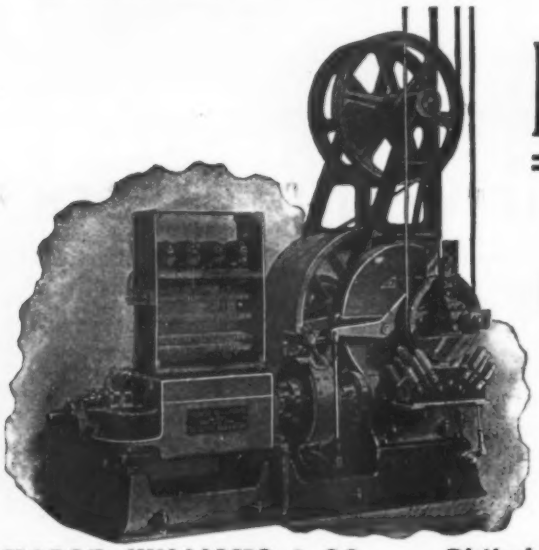

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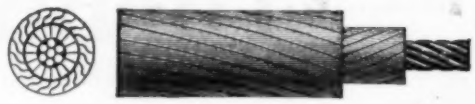

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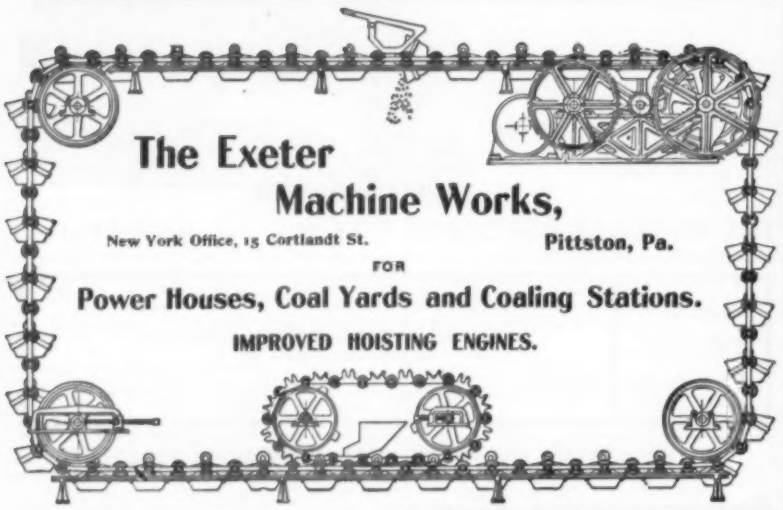

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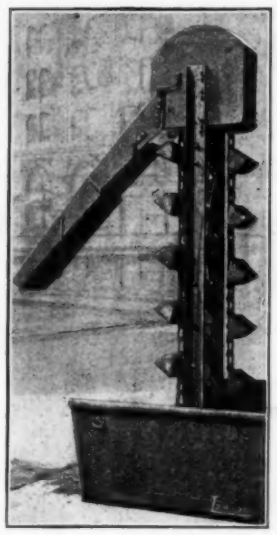

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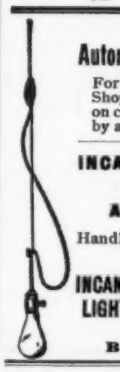

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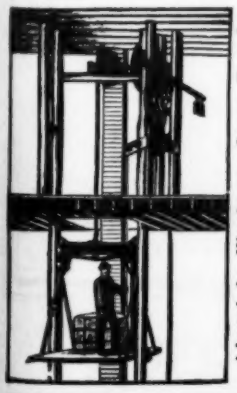

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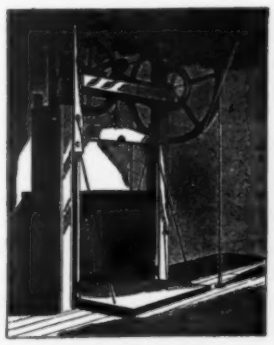

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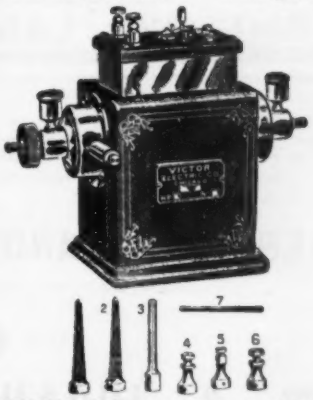

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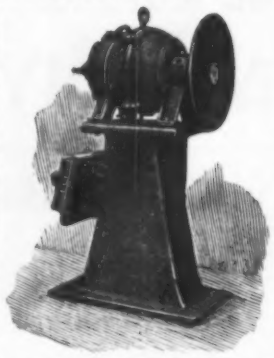

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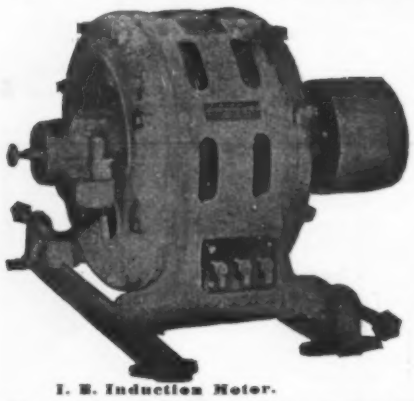

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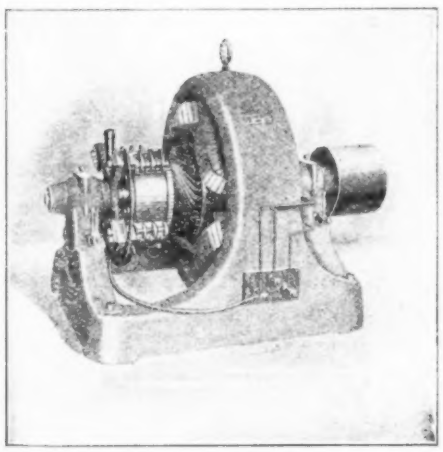

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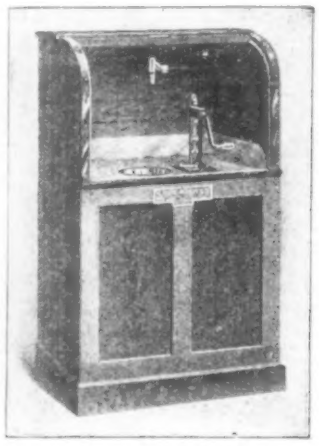

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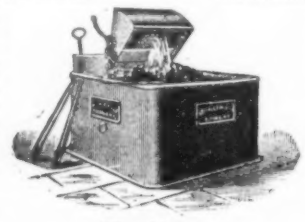

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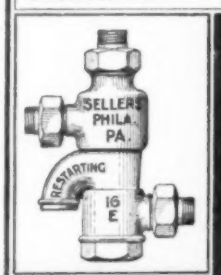

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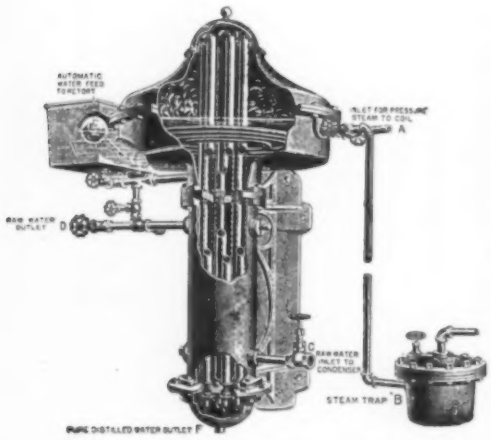

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For Alphabetical Index See Page 29.

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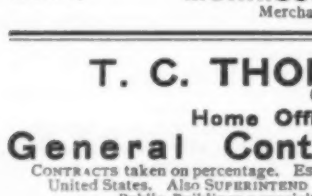

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Farquhar Co., A. B., Lt. ., York, Pa.
Frick Co., Waynesboro, Pa.
Gibbes, W. H., & Co., Columbia, S. C.
Greenwald Co., I. & E., Cincinnati, O.
Hardie-Tynes Fdy. & Mch. Co., Birmingham, Ala.
Harrisburg Fdry & Mch. Works, Harrisburg, Pa.
High Point Machine Works, High Point, N. C.
Hill, Wm. E., & Co., Kalamazoo, Mich.
International Power Co., Providence, R. I.
Leffel, James, & Co., Springfield, O
Lidgerwood Mfg. Co., New York, N. Y.
Lombard Iron Works & Supply Co., Atlanta, Ga.
McClave, Hamilton & Rimmer, New York, N. Y.
McIntosh, Seymour & Co., New York, N. Y.
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Mecklenburg Iron Works, Charlotte, N. C.
Minnigerode, Wm., Lynchburg, Va.
Newport News Shipb'g & Dry Dock Co., N. News, Va.
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Phoenix Iron Works Co., Meadville, Pa.
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Ridgway Dynamo & Engine Co., Ridgway, Pa.
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Schofields, J. S., Sons Co., Macon, Ga.
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Southwark Foundry & Machine Co., Philadelphia, Pa.
St. Louis Iron & Machine Works, St. Louis, Mo.
Struthers, Wells & Co., Warren, Pa.
Sturtevant Co., B. F., Boston, Mass.
Union Iron Works Co., Selma, Ala.
Valk & Murdoch Iron Works, Charleston, S. C.
Valley Iron Works, Williamsport, Pa.
Vilter Mfg. Co., Milwaukee, Wis.
Wetherill, Robert, & Co., Chester, Pa
Westinghouse Machine Co., Pittsburg, Pa.
York Mfg. Co., York, Pa.

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Blakeslee Mfg. Co., The, Birmingham, Ala.
Columbus Machine Co., Columbus, O.
Fairbanks Co., Baltimore, Md.
Olds Motor Works, Detroit, Mich.
Otto Gas Engine Works, Philadelphia, Pa.
Struthers, Wells & Co., Warren, Pa.
Westinghouse Machine Co., Pittsburg, Pa

Engines. (Gas and Kerosene.)
Mietz, A., New York, N. Y.

Engines. (Oil.)
Aultman Co., The, Canton, O.

Engravers.
Acme Photo-Engraving Co., Baltimore, Md.
Alpha-Photo Engraving Co., Baltimore, Md.
Baltimore Engraving Co., Baltimore, Md.
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Bonar James, & Co., Pittsburg, Pa.
Burt Mfg. Co., Akron, O.
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

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New Jersey Foundry & Machine Co., Plainfield, N. J.

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Electrical Material Co., Baltimore, Md.

Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

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Berryman, Jas., Philadelphia, Pa.
Bonar, James, & Co., Pittsburg, Pa.
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Green Fuel Economizer Co., Matteawan, N. Y.
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Harrison Safety Boiler Works, Philadelphia, Pa.
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Baeder, Adamson & Co., Philadelphia, Pa.

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Hammond Iron Works, Warren, Pa.
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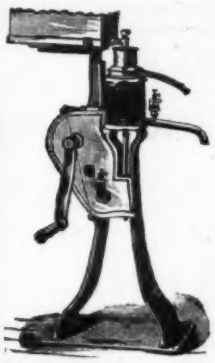

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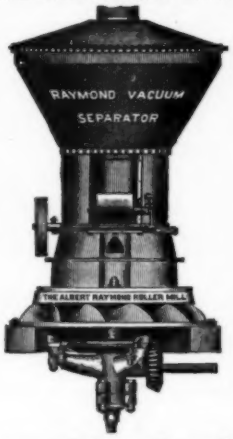

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Classified Index of Advertisers.

For Alphabetical Index See Page 29.

Fire Escapes.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works Co., Louisville, Ky.
Inglis, Wm., Wire & Iron Works, Detroit, Mich.

Flooring. (Polished Hardwood.)
Adams, J. M., Baltimore, Md.
Wilce Co., The T., Chicago, Ill.

Flour and Grist Mill Machinery and Supplies.
Alsing Co., Inc., J. R., Brooklyn, N. Y.
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Dehner-Wuerpel Mill Bldg. Co., St. Louis, Mo.
DeLoach Mill Mfg. Co., Atlanta, Ga.
Nordyke & Marmon Co., Indianapolis, Ind.
Salem Machine Works, Salem, Va.
Sprout, Waldron & Co., Muncy, Pa.
Starr, B. F., & Co., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Forges.
Boston Blower Co., Hyde Park, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., B. F., Boston, Mass.

Foundry Equipment and Supplies.
Etting, Edw. J., Philadelphia, Pa.
Hill & Griffith Co., Cincinnati, O.
Obermayer Co., S., Cincinnati, O.

Foundry Ladles. [See Foundry Equipment

Fuel Economizer.
Broomell, Schmidt & Co., Ltd., York, Pa.
Green Fuel Economizer Co., Matteawan, N. Y.

Fuel Oil Equipment and Machinery.
Petroleum Iron Works Co., Washington, Pa.
Rockwell Engineering Co., New York.
Tate, Jones & Co., Inc., Pittsburg, Pa.

Furnace Builders.
Erikson, Edw. E., Pittsburg, Pa.
Kennedy, Walter, Pittsburg, Pa.
Means & Fulton Iron Works, Birmingham, Ala.
Witherow, Jas. P., Pittsburg, Pa.

Furnace Heating. (Stoves.)
Richmond Stove Co., Norwich, Conn.

Furnaces. (Metallurgical.)
Rockwell Engineering Co., New York, N. Y.

Furnaces. (Gas Soldering.)
Jacobson Mch. Mfg. Co., Warren, Pa.

Gages (Recording) and Counters.
American Steam Gauge Co., Boston, Mass.
Crosby Steam Gauge & Valve Co., Boston, Mass.

Galvanized Sheets.
American Sheet Steel Co., New York, N. Y.

Gas Regulator.
Jacobson Machine Manufacturing Co., Warren, Pa.

Gas Producers.
Erikson, Edward L., Pittsburg, Pa.
Wood, R. D., & Co., Philadelphia, Pa.

Gas and Steam Fitters' Tools.
Saunders' Sons, D., Yonkers, N. Y.

Gaskets. (Rubber.)
Boston Belting Co., Boston, Mass.

Gear Cutting Machines.
Whiton Machine Co., D. E., New London, Conn.

Gears and Pinions. (Raw Hide.)
New Process Rawhide Co., Syracuse, N. Y.

Gearing.
Chester Steel Castings Co., Philadelphia, Pa.
Fairmount Machine Co., Philadelphia, Pa.
Jeffrey Mfg. Co., The, Columbus, O.
Greenwald Co., I. & E., Cincinnati, O.
Link-Belt Engineering Co., Philadelphia, Pa.
Morse, Williams & Co., Philadelphia, Pa.
New Process Rawhide Co., Syracuse, N. Y.
Nuttall Co., R. D., Pittsburg, Pa.
Smith Co., S. Morgan, York, Pa.
Woods' Sons, T. B., Chambersburg, Pa.

Geologist.
Catlett, Chas., Staunton, Va.

Graphophones.
Columbia Phonograph Co., Balto., Md.

Grates and Grate Bars.
McClave, Brooks & Co., Scranton, Pa.

Grates. (Domestic.)
Burnham Grate Co., Huntsville, Ala.

Grain Elevator Supplies.
Aultman Co., The, Canton, O.
Caldwell, H. W., & Son Co., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Engineering Co., Nice'own, (Phila.) Pa.

Graphite.
Detroit Graphite Mfg. Co., Detroit, Mich.
Dixon Crucible Co., Jos., Jersey City, N. J.
Hill & Griffith Co., Cincinnati, O.

Grease. (Lubricating.)
Cook's Sons, Adam, New York, N. Y.
Robinson, Wm. C., & Son, Baltimore, Md.

Grinding and Polishing Mchy.
Abrasive Material Co., The, Philadelphia, Pa.
Builders' Iron Foundry, Providence, R. I.
Carborundum Co., The, Niagara Falls, N. Y.
Norton Emery Wheel Co., Worcester, Mass.
Scranton Corundum & Emery Wheel Co., Scranton, Pa.
Sturtevant Mill Co., Boston, Mass.
Tanite Co., The, Stroudsburg, Pa.
Vitrified Wheel Co., Westfield, Mass.

Grooves.
Huther Bros., Rochester, N. Y.

Hammers. (Steam and Power.)
Dupont Mfg. Co., St. Johnsbury, Vt.
Robinson, J. M. & Co., Cincinnati, O.

Hammers. (Pneumatic.)
Standard Pneumatic Tool Co., Chicago, Ill.

Handle Mchy. [See Woodwork'g Mchy.]
Egan Co., The, Cincinnati, O.
Fay, J. A., & Co., Cincinnati, O.
Root, B. M., York Pa.
Trevor Mfg. Co., Lockport, N. Y.

Hardware Specialties.
Covert Mfg. Co., West Troy, N. Y.
Schaefer, W. J., & Co., New York, N. Y.
Wrightsville Hardware Co., Wrightsville, Pa.

Hardwood Flooring.
Adams, J. M., Baltimore, Md.
Wilce Co., The T., Chicago, Ill.

Hay Tools.
Myers & Bro., F. E., Ashland, O

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Exeter Machine Works, Exeter, N. H.
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Peck-Hammond Co., The, Cincinnatti, O.
Richmond Stove Co., Norwich, Conn.
Sturtevant Co., B. F., Boston, Mass.
Vapor Heating Co., York, Pa.
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Hoisting Machinery.
Byers Machine Co., John F., Ravenna, O.
Carlin Machinery & Supply Co., Allegheny, Pa.
Case Manufacturing Co., The, Columbus, O.
Contractors' Plant Mfg. Co., Buffalo, N. Y.
Exeter Machine Works, Pittston, Pa.
Hardie-Tynes Fdy. & Mch. Co., Birmingham, Ala.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., The, Columbus, O.
Link-Belt Engineering Co., Philadelphia, Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., The, Cincinnati, O.
Robinson Machine Co., Monongahela, Pa.
Simpson Mfg. Co., Chicago, Ill.
Sullivan Machinery Co., Chicago, Ill.
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Boston Belting Co., Boston, Mass.
Eureka Fire Hose Co., New York, N. Y.
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Cliff & Guibert Co., New York, N. Y.

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New St. Charles Hotel, New Orleans, La.

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Power Specialty Co., New York, N. Y.

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American Steam Gauge Co., Jamaica Plain, Mass.
Crosby Steam Gauge & Valve Co., Boston, Mass.

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Cedartown Co., Philadelphia, Pa.
Gadsden Com. & Industrial Assn., Gadsden, Ala.
Old Dominion Land Co., Newport News, Va.
Wheeling Board of Trade, Wheeling, W. Va.

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Stuebner Iron Works, G. L., Long Island City, N. Y.

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American Injector Co., Detroit, Mich.
Jenkins Bros., New York, N. Y.
Lunkenheimer Co., Cincinnati, O.
Ohio Injector Co., Wadsworth, Ohio.
Penberthy Injector Co., Detroit, Mich.
Watson, N. A., Erie, Pa.

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Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.
Maryland Casualty Co., Baltimore, Md.

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Electrical Material Co., Baltimore, Md.

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Electrical Material Co., Baltimore, Md.
New Orleans Wood Preserving Wks., New Orleans, La.
Houston & Liggett, Lewisburg, Tenn.

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Electrical Material Co., Baltimore, Md.
Hazard Manufacturing Co., Wilkes Barre, Pa.

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Alabama Consol. Coal & Iron Co., Birmingham, Ala.
American Iron & Steel Mfg. Co., Lebanon, Pa.
American Sheet Steel Co., New York, N. Y.
American Steel Hoop Co., Pittsburg, Pa.

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Armstrong, R. S., & Bro., Atlanta, Ga.
Cox, Jr., Justice, & Co., Inc., Philadelphia, Pa.
Etting, Edw. J., Philadelphia, Pa.

Jacks. (Lifting, Track and Oil Well.)
Watson-Stillman Co., New York, N. Y.

Kettles. (Steam Jacket.)
Badger, E. B., & Sons Co., Boston, Mass.

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Campbell & Clute Machine Co., Cohoes N. Y.
Excelsior Knitting Machine Co., Allentown, Pa.
Mayo Knitting Machine & Needle Co., Franklin, N. H.
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Acorn Brass Works, Chicago, Ill.
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Electrical Material Co., Baltimore, Md.
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General Incandescent Arc Light Co., New York, N. Y.
Kentucky Electrical Co., Owensboro Ky.
Shelby Electric Co., Shelby, O.
Westinghouse Electric & Mfg. Co., Pittsburg, Pa.

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Imperial Gas Lamp Co., Chicago, Ill.

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Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

Lamp Adjuster. (Incandescent)
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

Lamp Renewer. (Incandescent)
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

Lamps. (Incandescent Hydro Carbon.)
Kitson Hydro Carbon, H. & I. L., Co., Phila., Pa.

Lands.
Beaumont Trust Co., Beaumont, Tex.
Brobston, Fendig & Co., Brunswick, Ga.
Dibble, S., Orangeburg, S. C.
Hornaday, J. P., Cincinnati, O.
Killebrew, J. B., Industrial and Immigration Agent, Nashville, Tenn.
Richards, M.V., Land & Industrial Agt., Wash., D. C.
Sutherland, Howard Land Agent, Elkins, W. Va.
Watson, R. E., Atlanta, Ga.

Lanterns.
Dietz Co., R. E., New York.

Lathes. (Engine.)
American Tool Works Co., Cincinnati, O.
McCabe, J. J., New York, N. Y.
Schumacher & Boye, Cincinnati, O.

Laundry Machinery.
Adams Laundry Machinery Co., Troy, N. Y.
Sinclair Co., S. H., Chicago, Ill.
Wilson Laundry Machinery Co., Columbia, Pa.

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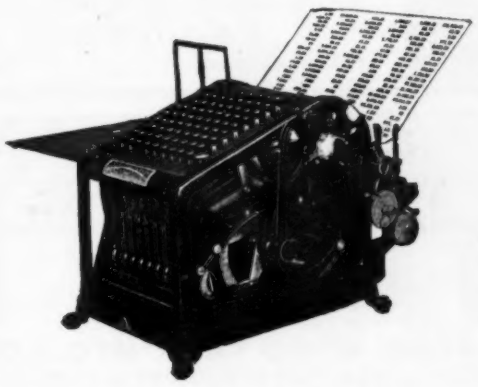

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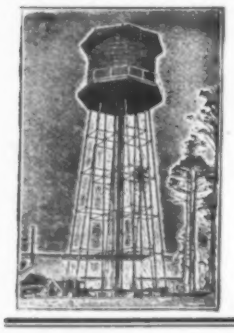

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Looms and Weaving Machinery.
American Supply Co , Providence, R. I.
Draper Co., Hopedale, Mass.
Fairmount Machine Co., Philadelphia, Pa.
Kilburn, Lincoln & Co., Fall River, Mass.
Lowell Machine Shop, Boston, Mass.
Mason Machine Works, Taunton, Mass.

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Crosby Steam Gauge & Valve Co., Boston Mass.
Detroit Lubricator Co., Detroit, Mich.
Lunkenheimer Co., Cincinnati, O.
Penberthy Injector Co., Detroit, Mich.

Lumber and Hardwoods.
Hallam, W. W., Macon, Ga.
Wilce Co., The T., Chicago, Ill.

Machinery. (Winding, Measuring & Folding.)
Philadelphia Textile Specialty Mch. Co., Phila., Pa.

Machinery. (Special.)
Alsing Co., J. R., Inc., Brooklyn, N. Y.
Aultman Co., The, Canton, O.
Leffer, Charles, & Co., Brooklyn, N. Y.
Philadelphia Textile Specialty Mch. Co., Phila., Pa.
Royersford Foundry & Machine Co., Royersford, Pa.

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Armstrong, R. S., & Bro., Atlanta, Ga.
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Bowen, Joseph E., Norfolk, Va.
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Camp Engineering Co., Chicago, Ill.
Carlin Machinery Supply Co., Allegheny, Pa.
Casey, D. L., Mch. Co., Springfield, O.
Chicago House Wrecking Co., Chicago, Ill.
Cleveland Belting & Machinery Co., Cleveland, O.
Conard, Thos. P., Philadelphia, Pa.
Cox, Justice Jr., & Co., Ltd., Philadelphia, Pa.
Fairmont Coal Co., Fairmont, W. Va.
Henning, John, & Son, Philadelphia, Pa.
Harris, C. C., St. Louis, Mo.
Jones, J. B., & Co., Allegheny, Pa.
Lehman, Charles T., Birmingham, Ala.
Mallory, J. D., Baltimore, Md.
Mengel Machinery Exchange, Baltimore, Md.
Minnigerode, Wm., Lynchburg, Va.
Paradox Machinery Co., Chicago, Ill.
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Price Machinery Co., Chicago, Ill.
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Saxton, J. C., New York, N. Y.
Seyfert's, L. F., Sons, Philadelphia, Pa.
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Toomey, Frank, Philadelphia, Pa.
Torbert & Peckham, Chicago, Ill.
Trampe, Charles F., St. Louis, Mo.
Warren-Burnham Co., New York, N. Y.
Waters, John A., & Co., Richmond, Va.
Wickes Bros., Pittsburg, Pa.
Williams, E. O., Chicago, Ill.
Wisconsin Mchy. Co., Milwaukee, Wis.

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Royersford Foundry & Machine Co., Royersford, Pa.
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Milling Machines.
American Tool Works Co., Cincinnati, O.

Mineral Wool.
U. S. Mineral Wool Co., New York, N. Y.

Mine Locomotives. (See Locomotive B'ldrs.)

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Cresson Co., Geo. V., New York, N. Y.
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Mining Screens. [See Screens.]

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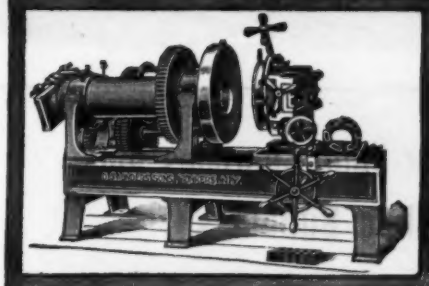

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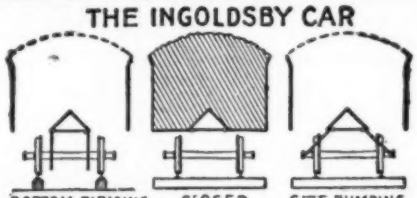

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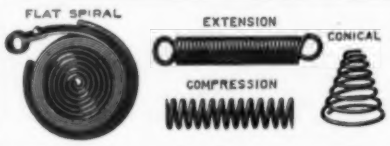

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For Alphabetical Index See Page 29.

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Cresson Co., Geo. V., New York, N. Y.
Dehner-Wuepel Mill Building Co., St Louis, Mo.
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Fay, J. A., & Co., Cincinnati, O.
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Greenwald Co., I. & E., Cincinnati, O.
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McGowan Co., John H., Cincinnati, O.
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Downie Pump Co., Downieville, Pa.
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Stilwell-Bierce & Smith-Vaile Co., Dayton, O.
Wood, R. D., & Co., Phila., Pa.

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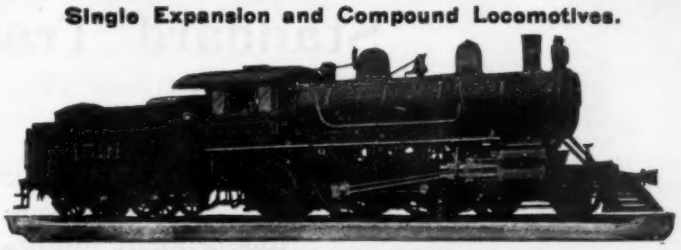

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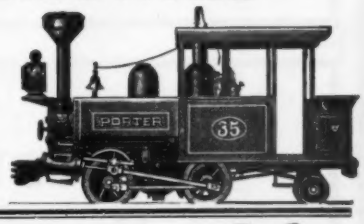

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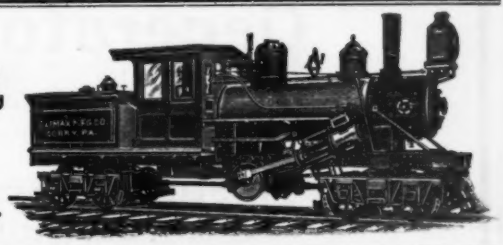

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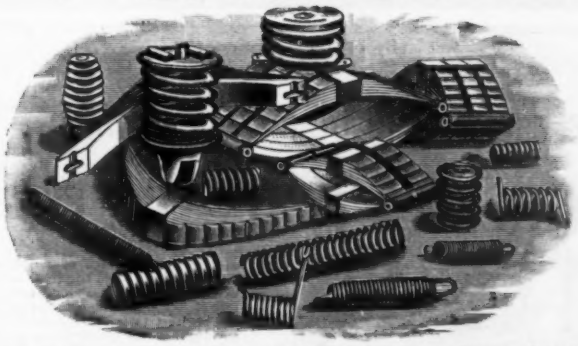

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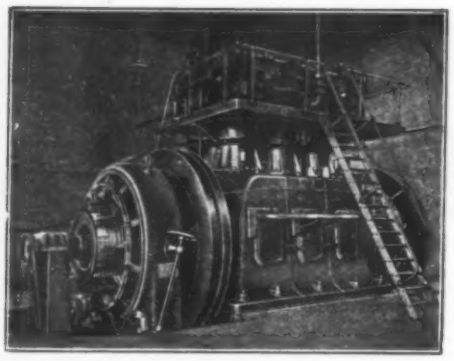

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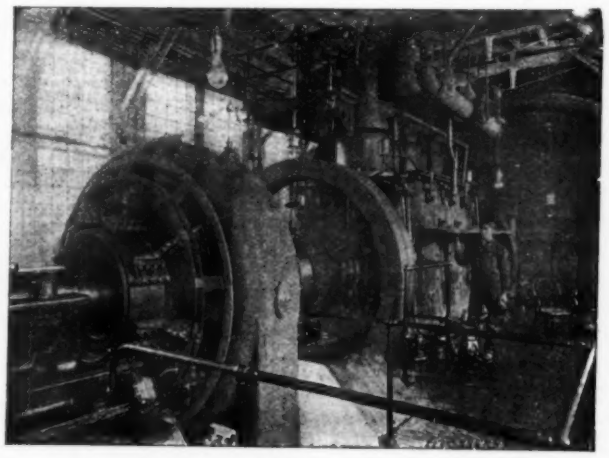

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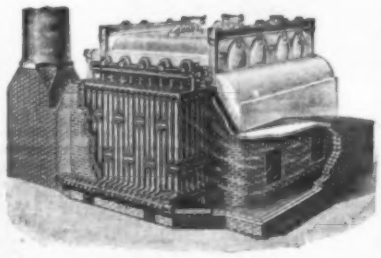

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Classified Index of Advertisers.

For Alphabetical Index See Page 29.

Seals. (Stock Certificates, etc.)
Middleton, J. W., Chicago, Ill.

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Bowser & Co., S. F., Ft. Wayne, Ind.

Separators. (Cream.)
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American Tool Works Co., Cincinnati, O.

Sheet-Metal-Working Machinery.
[See Metal-Working Machinery.

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American Sheet Steel Co., New York, N. Y.

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[See Woodworking Machinery.]
Lane Mfg. Co., Montpelier, Vt.
Trevor Mfg. Co., Lockport, N. Y.

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Hammond Iron Works, Warren, Pa.
Keeler, E., Co., Williamsport, Pa.
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Lykes, John D., Birmingham, Ala.

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Mecklenburg Iron Works, Charlotte, N. C.

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Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Means & Fulton Iron Works, Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.
York Mfg. Co., York, Pa.

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Crosby St. Gage & Valve Co., Boston, Mass.
Lunkenheimer Co., Cincinnati, O.

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General Fire Extinguisher Co., Providence, R. I.

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Keeler Co., E., Williamsport, Pa.
Peck-Hammond Co., The, Cincinnati, O.
Warren Webster & Co., Camden, N. J.

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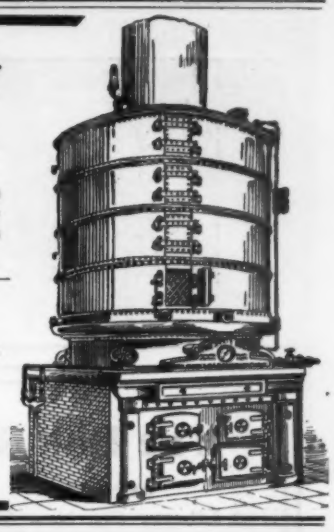

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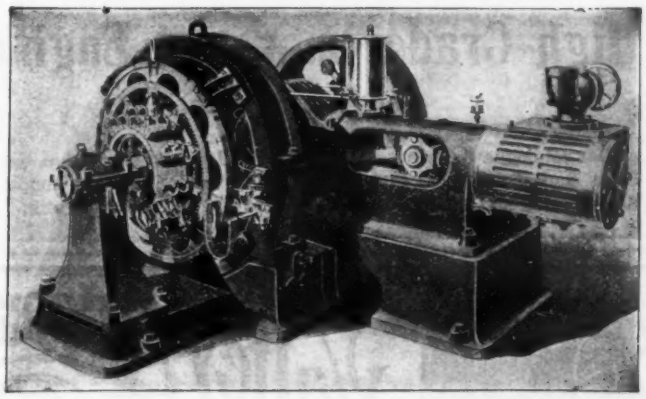

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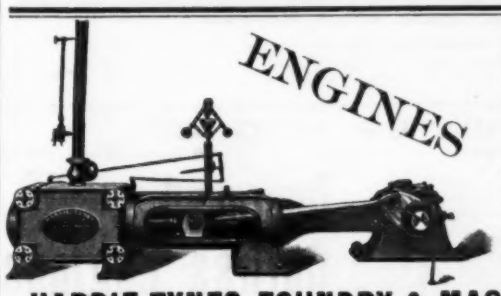

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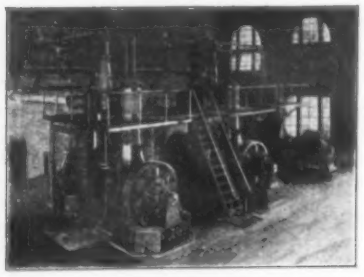

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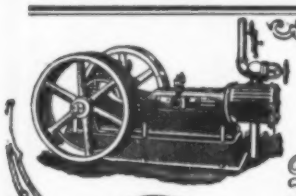

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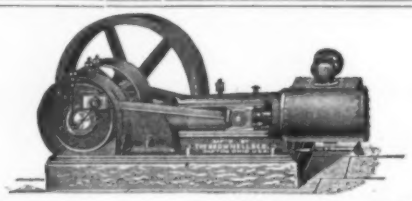

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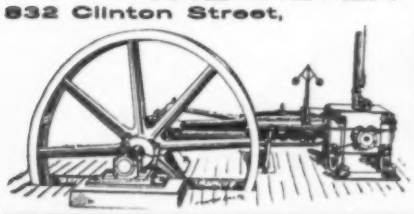

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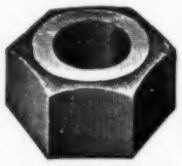

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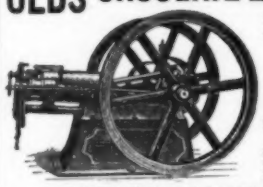

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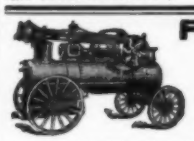

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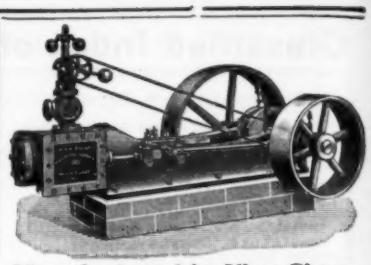

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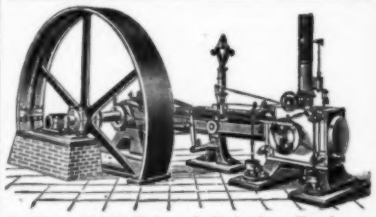

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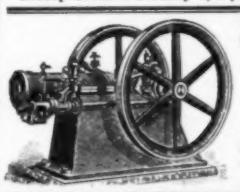

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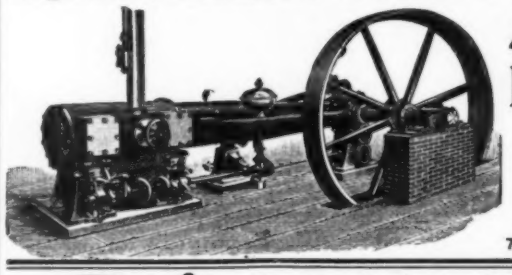

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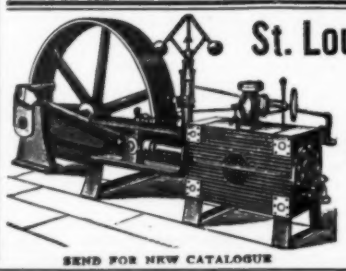

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Gould, F. M., Richmond, Va.
Hughes Specialty Well Drilling Co., Charleston, S. C.

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Gibbes, W. H., & Co., Columbia, S. C.
Greaves, Klusman & Co., Cincinnati, O.
Huther Bros, Rochester, N. Y.
Lane Mfg. Co., Montpelier, Vt.
Root, B. M., York, Pa.
Salem Iron Works, Winston-Salem, N. C.
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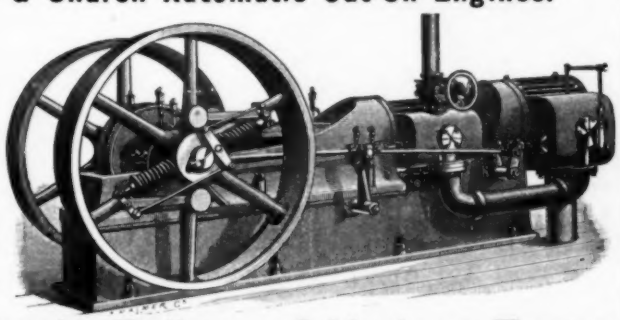

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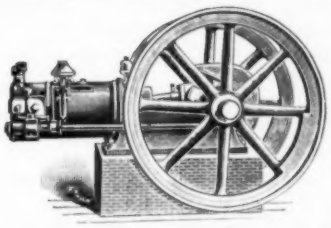

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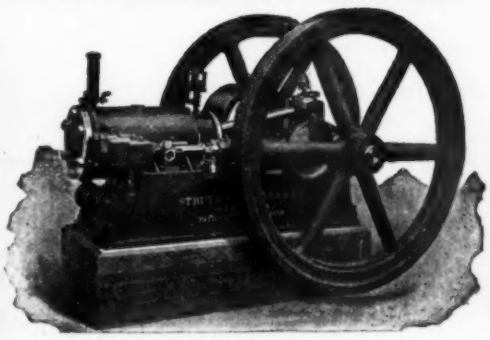

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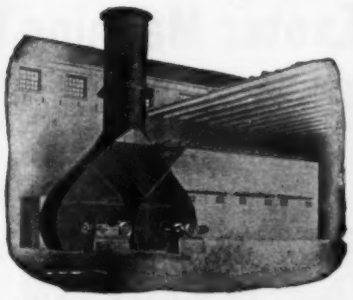

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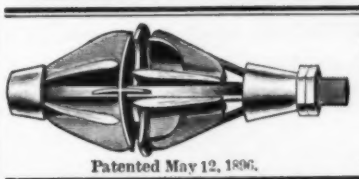

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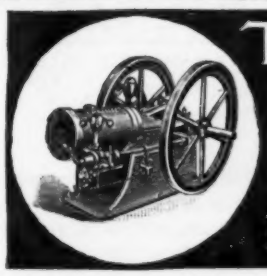

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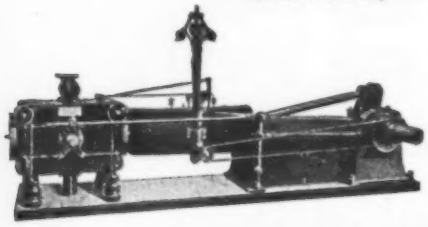

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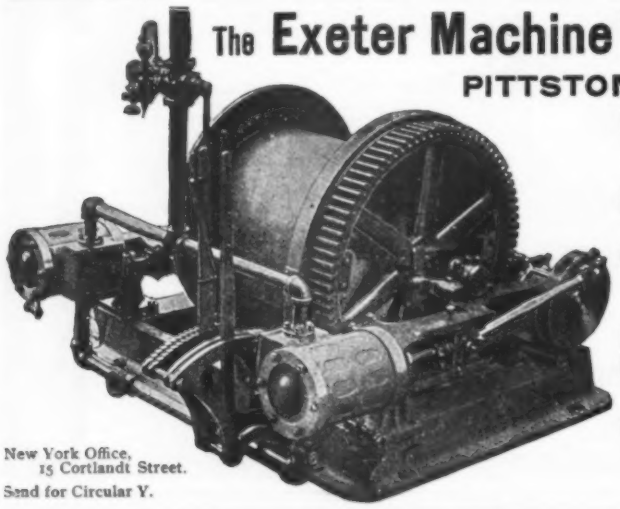

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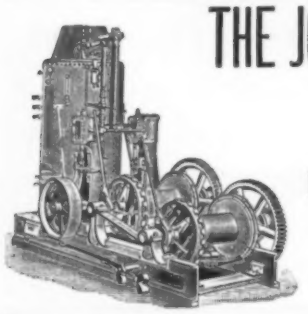

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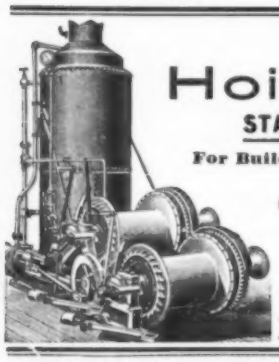

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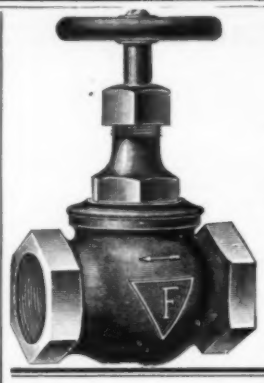

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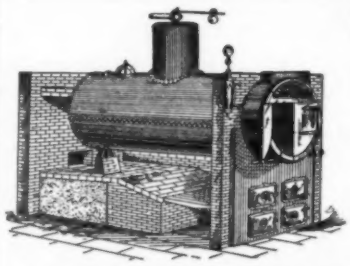

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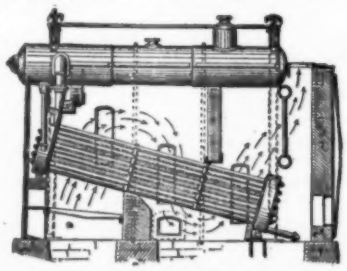

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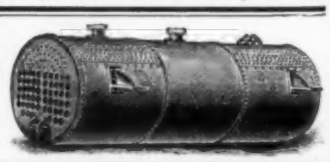

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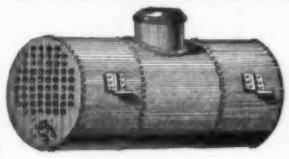

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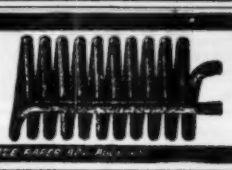

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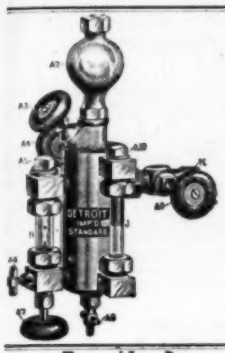

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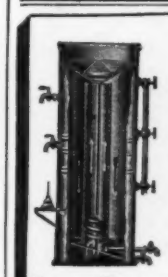

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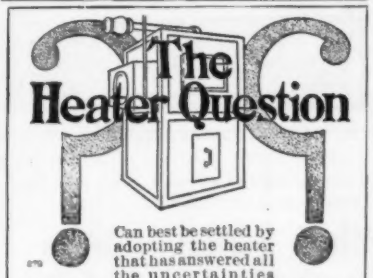

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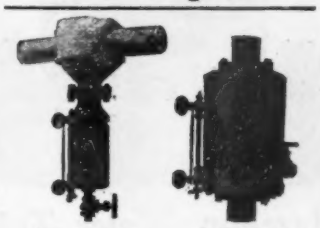

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It is not safe to use for boiler-feed purposes the water that drips from a closed heater; this water is condensed exhaust steam, and it is contaminated with the lubricant used in the engine cylinder. Any boiler inspector will tell you that it is dangerous to introduce such oily water into boilers. Were it not for the oil this water would be well worth saving, because it is hot, and because it is free from scale-forming matter.

In order to save it, all you have to do is to put a

COCHRANE OIL SEPARATOR

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Have you any idea how much of this pure water you are now throwing away through using a closed heater without an oil separator?

It means, in the average case, about two and a half tons per day of ten hours for every 100 H. P. of steam that you are making.

This is an item against which the cost of a Separator is merely nominal. Thousands of these "COCHRANE'S" in successful operation.

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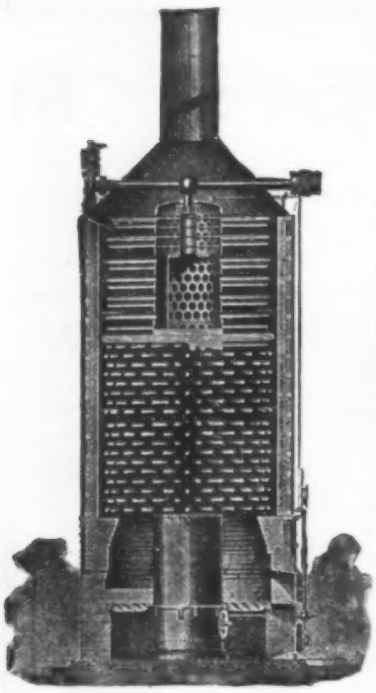

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are the Pioneer Vertical Water Tube Boilers of the world. They passed the experimental stage years ago.

Now our earliest customers like to write and tell about the good service our boilers are still giving after 18 to 20 years' of use.

This should be a valuable suggestion to you.

We also make Stacks, Tanks and miscellaneous Metal work. Write to us about it

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The Wright Steam Separator

Does what a Steam Separator is meant to do

It separates water from the steam; doesn't convert the steam into water. In other words, the steam is not brought into contact with a needless amount of condensing surface.

Perfect separation is accomplished without diverting the steam current from its natural course.

In form, a perfect sphere—the strongest, lightest, most compact form possible for a Steam Separator.

Its merits will interest every steam user who looks for durability and efficiency at a low price.

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Austin Separators remove the moisture from live steam; also oil, grease and other dangerous elements from exhaust steam.

Austin Separators have a large area of separating surface and a perfect system of drainage.

Austin Separators are always safe and sure in practical operation. Mechanically perfect in construction. Built in various styles and sizes.

Will be sent on 30 days' trial, to be returned at our expense if not satisfactory.

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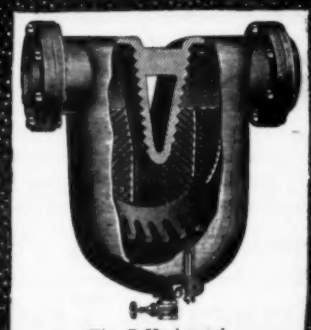

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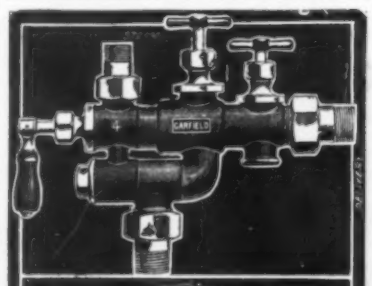

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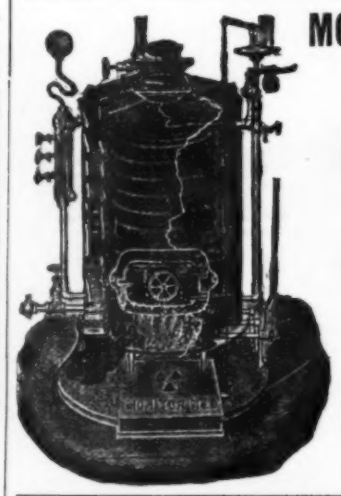

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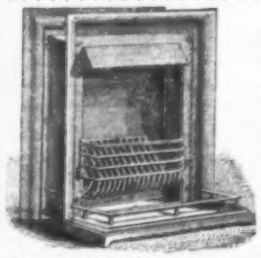

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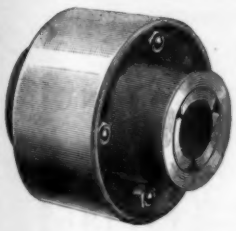

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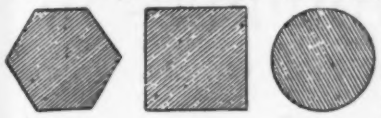

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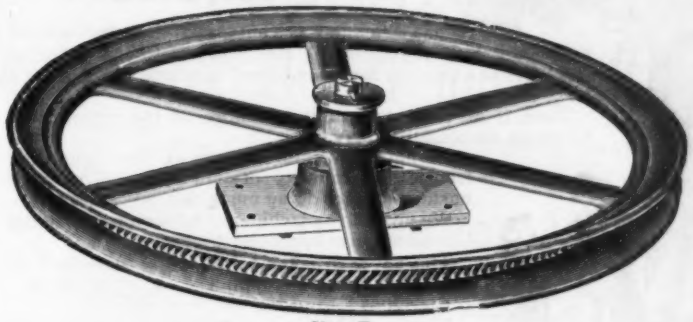

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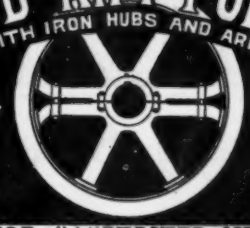

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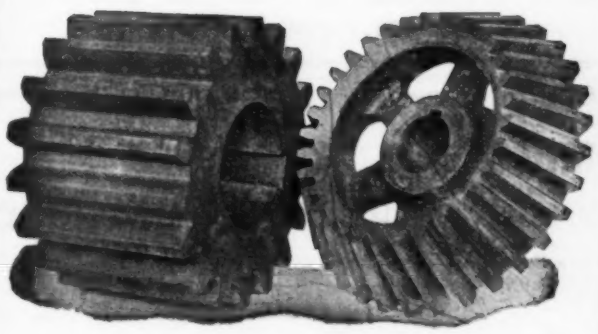

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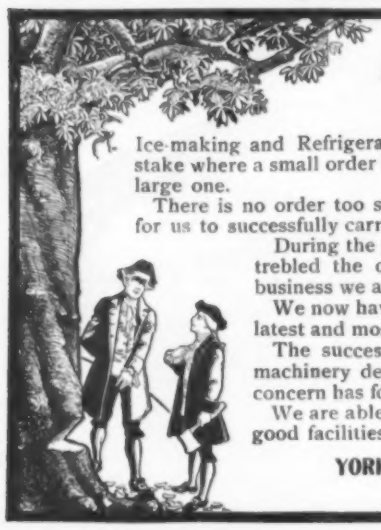

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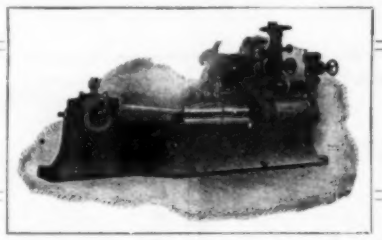

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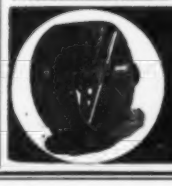

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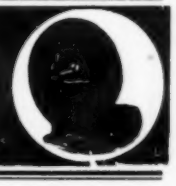

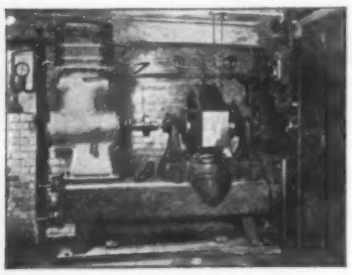

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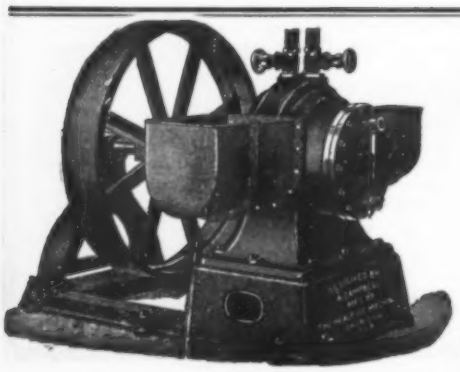

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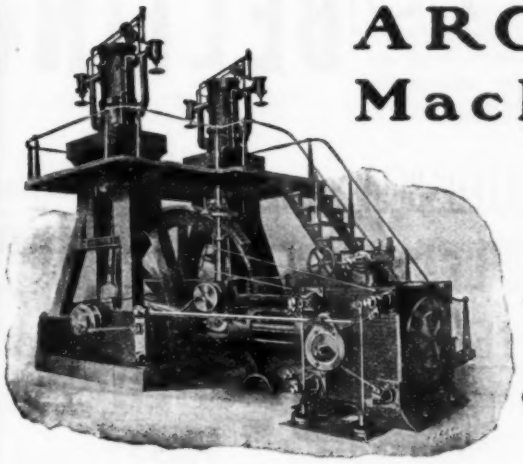

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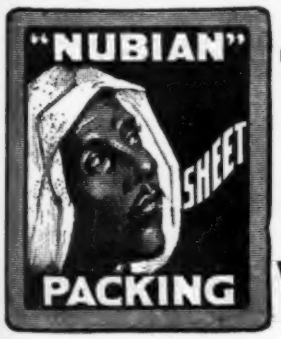

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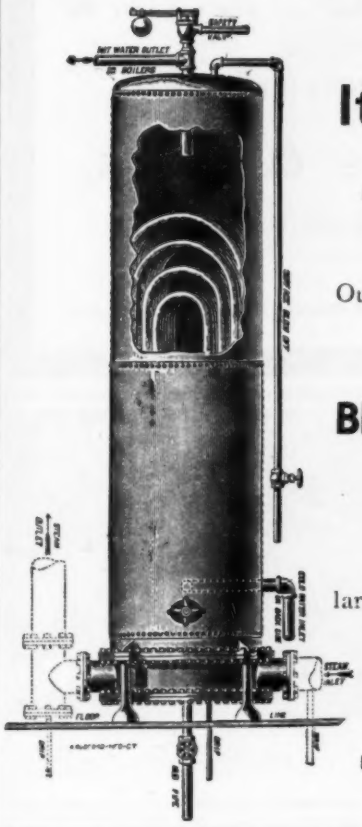

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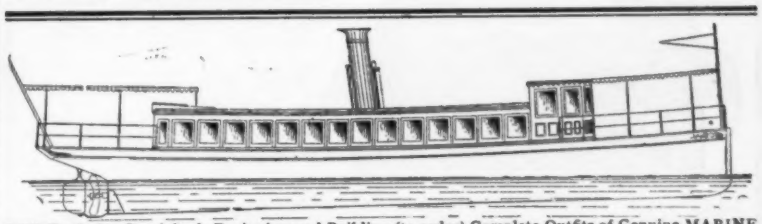

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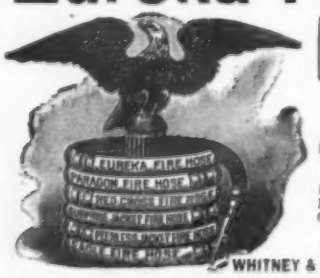

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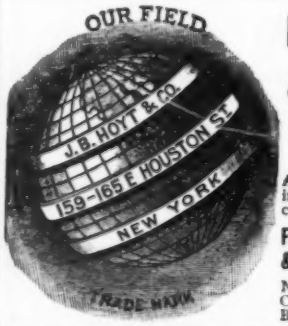

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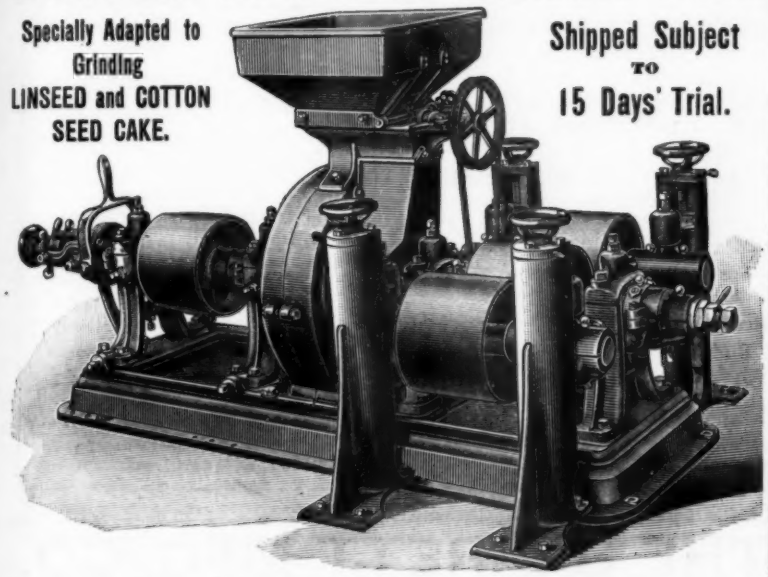

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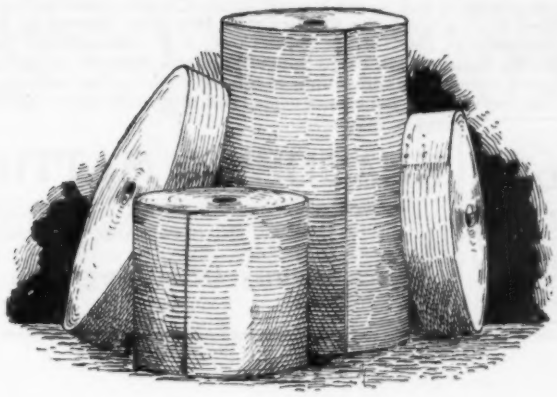

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Important Litigation Relating to Magnesia Covering Patents.

The Keasbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the **Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr** to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50% of magnesia, and especially coverings containing 85% of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

☞ All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. ☜

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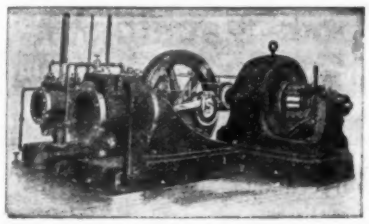

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